SOUPING THE '54 FORD!

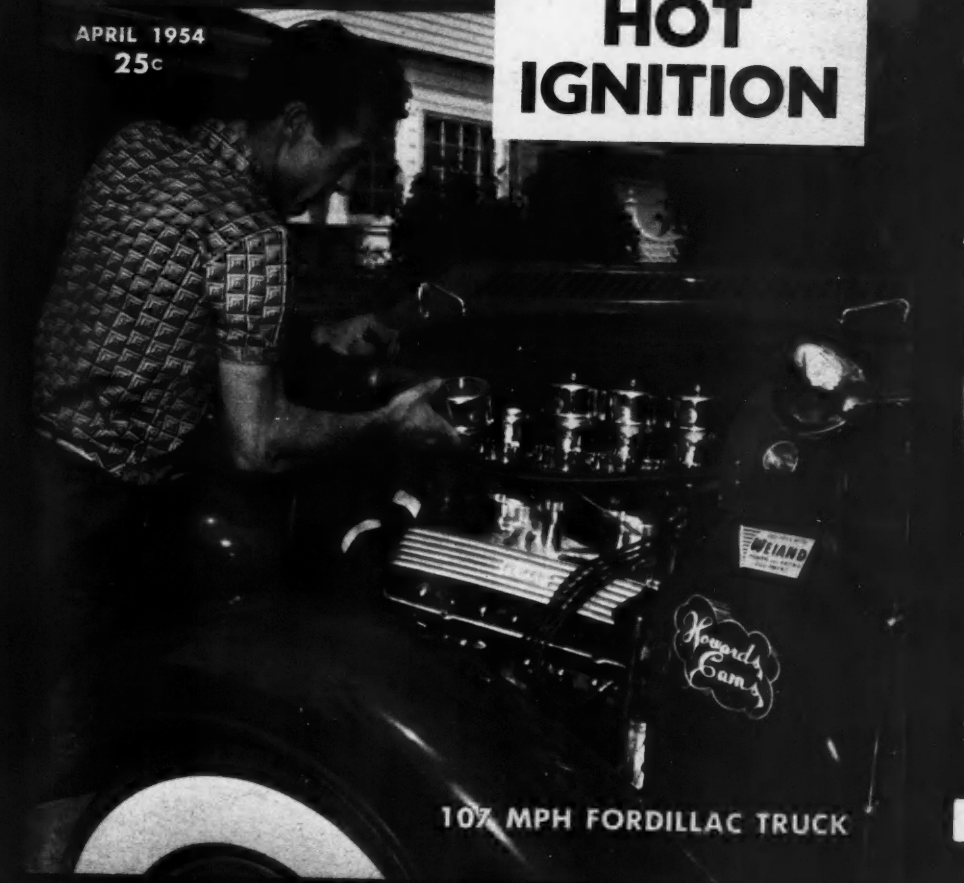
CAR CRAFT

The SHOW-HOW Magazine

CUSTOM CARS • HOT RODS

Build Your Own
HOT IGNITION

APRIL 1954
25c



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CAR CRAFT

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COVER

When George Smith pulled up to the starting line at Santa Ana, nobody laughed. When he came back from the finish line they realized they'd been wise. George has been building hot rod pickups for years, being somewhat truck-nutty, preferring haulers to anything else. The full story of Smith's pickup starts on page 20.

Cover Ektachrome by Felix Zelenka

CISCO SAYS:

MUCH correspondence has crossed our desk lately from readers desiring information regarding the advisability of installing late model Lincoln and Cadillac engines in 1949 and later Ford and Mercury chassis. Many of these readers have also asked if either of these powerplants has any features which might give it a logical preference over the other. Perhaps the easiest way to answer these questions is by comparing the various features of the engines that might make them desirable or undesirable for an installation of this type.

A fellow must be performance conscious to become interested in installing a large displacement engine in his Mercury. Therefore, the horsepower and torque output of the engine he should use are basic factors which must be considered. Factory specifications credit the 1953 Cadillac with 210 hp at 4150 rpm and 330 foot pounds of torque at 2700 rpm. The 1953 Lincoln is rated at 205 hp at 4200 rpm and 305 foot pounds of torque at 2650 rpm. Cadillac for 1954 is rated at 230 hp, Lincoln will remain at 205. All other things being equal, performance provided by the Cadillac should exceed that of the Lincoln.

An installation of this type will increase the automobile's total weight because either of these large displacement engines is considerably heavier than the Mercury it is to replace. Approximately two thirds of this additional weight will rest on the car's front wheels. A car's total weight affects its acceleration and excessive weight on the front wheels could be detrimental to handling. In some instances it is necessary to install stiffer front coil springs with a heavier engine; in all instances it is advisable to install heavy duty double action shock absorbers on the front to better control the additional weight. We've been unable to obtain accurate weights of either of these engines but it is the consensus among those who have worked with both that the Lincoln is definitely the heavier of the two.

Problems involved in the actual installation of either a Cadillac or Lincoln in a Mercury chassis differ somewhat but neither of them present any insurmountable obstacles. Flywheel adaptor housings and clutch assemblies are readily available for both engines; new front motormount supports will have to be provided on the frame for either one. It may be necessary to relocate the generator on either engine. In addition to these modifications it will be necessary to install a Ford 317 truck engine oil pan on the Lincoln so the sump on the pan will not interfere with the front crossmember of the Mercury frame. Also, it is doubtful whether it will be possible to use the Lincoln fuel pump because of its position in relation to the same crossmember. If the crossmember does interfere with the fuel pump it will be necessary to install an electric pump of some type between the fuel tank and the carburetor.

Another point that should be considered, although it may not seem important at the time of installation, is the availability of special parts and equipment for the engine chosen. At the present time equipment of this type is practically nil for rocker arm Lincolns, but a complete line of special parts ranging from dual point distributor plates to stroked crankshafts is available for Cadillacs.

Finally, although this probably should have been considered first of all, is the problem of the cost of the conversion. At this time, in the Los Angeles area, new 1953 Cadillac engines, complete with accessories, are available from dealers for $670.00. Lincoln engines, complete with accessories, list for $851.00. Charges for installation and prices of the special conversion parts necessary should be approximately the same for either engine.

Don Francisco

BRIEF AND TO THE POINT:

293 Words From the Editor

A glance at the facing page will show that something new has been added. It's a good bet that most of our readers are familiar with Don Francisco's technical writing, Cisco having done the story on the Buick powered Pikes Peak car a couple of months back. Don also did a considerable stint for our companion magazine, HOT ROD. The idea of a column by Don is that we don't have space for a special technical correspondence column. This is the way it'll work: we will pick out questions from our regular correspondence that we feel will benefit the most readers, lump them all in a general paragraph and have Don answer them. Please don't address correspondence directly to Cisco, since answering these rapidly becomes a full-time job, which Don already has.

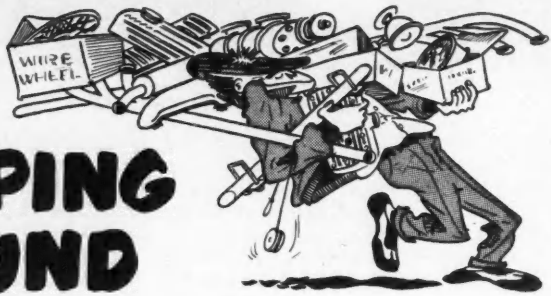
Peace, fellows! We've been getting swamped with two very special kinds of mail over the past month. One type is in unanimous disagreement with one W. R. VanKorben, a gent who told us he didn't care for the material we print. The other type concerns itself with a caption in the January CC in which our Associate Editor, Dick Day, to quote the letters, "goofed." Dick, who cheerfully admits the "butch," called out a set of '49 Buick taillights gracing Don Pulford's blue cover Merc as '52's. He is now thoroughly conversant with Buick taillights —you name the year. Anyhow, to answer all the letters re VanKorben and the "butch" would take a month and to print them would take a special issue of CC, so we hope you'll forgive us for a blanket acknowledgement.

Incidentally, before you start tearing into that '54 Ford or Merc, take a good close look at Chuck Eddy's scoop on pages 10 through 15. It's a real humdinger.

THINGS TO COME

IN Chuck Eddy's '54 Ford story, you'll see mention made of young Henry's new Industrial Four. This is a little-known mill of unlimited possibilities, being made in two sizes, 134 and 171 cubic inches respectively. Both engines fit nicely into two different competition classifications. However, they require that certain "anchors" be removed, the biggest being intake and exhaust restrictions. Les Nehamkin has dug us up a step-by-step photo story on just how this can be done by anybody who is handy with a torch. Eddy might just have a few thousand words on these rugged little four bangers, too. To our way of thinking, these engines are just about ideal for the guy who wants to stuff a small car together or to add punch to an MG or other small-bore job.

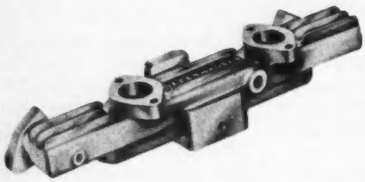
Also coming up real soon is a story on how a couple of lads managed to pull 258 horsepower out of a 258 cubic-inch Dodge V8—on gasoline! Not only that but to date they've been able to pump 302 horses through that mill running alcohol fuel. This, we might add, is competing with the real hairy-chested engines.



SHOPPING AROUND

DODGE INTAKE

NEW from Offenhauser is this little goodie for '37 to '54 Plymouths and '38 to '54 Dodge Sixes. For readers in West Timbuktu it might be best explained that this is a



dual intake manifold, a gadget which supplies a more equal fuel distribution and a better fuel/air ratio when properly installed. Readers in all other parts of the world know this already, so all we really should have to say is that it sells complete with throttle linkage, gaskets and fuel lines for $47.00 in satin finish and $3.85 more when buffed. For the Plymouth the order number is 2691 and number 2374 is for the Dodge. Manufacturer is Offenhauser Equipment Corp., 5361 Alhambra Avenue, Los Angeles 32, Calif.

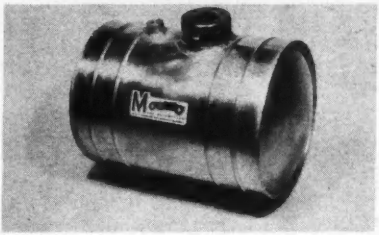
JAGUAR BUMPERS

JAG owners tired of having front and rear ends scuffed up by inconsiderate members of the Cadillac set can end the problem very neatly with a set of wraparound

bumpers made of square tube steel by Chuck Porter, Hollywood custom artist. The bumpers are unobtrusive but extremely solid and equipped to fit existing brackets. All that's needed for mounting is a good Crescent wrench. For price and further information write: Chuck Porter's Body Shop, 4720 Sunset Blvd., Hollywood 28, California.

PRESSURE TANK

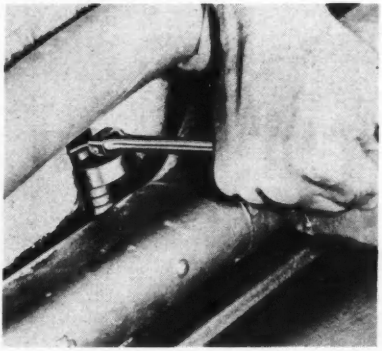
ENGINEERED and manufactured primarily for the use of hot rodders, is this all aluminum fuel pressure tank. Ideal for the



competition minded builder, the tanks are Heli-arced and gas aluminum welded together, undergoing pressure testing far more strenuous than necessary. A heavy duty spring loaded pressure cap with a large opening makes for easy fuel insertion. Tanks come in three popular sizes, 2 gallons, 3½ gallons, and 4 gallons. Mounting brackets are also available at an extra charge. For additional information and prices write or see Moon Automotive Equipment, 10935 S. Bloomfield Avenue, Norwalk, Calif.

HOLLOW RATCHET WRENCH

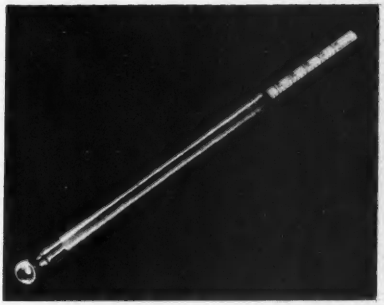
HERE'S A nifty gimmick for those with tender knuckles. It's a hollow ratchet wrench that should be quite the thing for working



in tight places. The neat thing about it is that the ratchet head and sockets are centerless, which means that it's suitable for spark plugs, studs and other high centered obstacles ordinarily requiring special tools. A torque handle can also be used with the ratchet head. Six sets are offered with a total of 64 snap-in sockets covering a range of from ⅜ inch diameter to four inches, a pretty wide selection. The manufacturer is Tubing Appliance Co., 10321 Anza Avenue, Los Angeles 45, Calif.

NYLON TIRE GAUGE

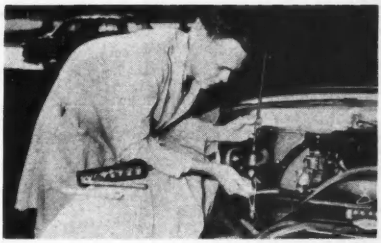
FIRST it was mama's hosiery, then shirts, then parachutes; now just about anything can be made from Nylon. Here's a tire gauge which makes use of the stuff for the slide bar. According to the manufacturer, Nylon has several advantages over metal for



such uses. Included, the man says, is easier readability due to clearer pressure figures. In addition the Nylon bar requires no lubrication and has no tendency to corrode. It's also less likely to be permanently bent out of shape. The gauge is manufactured by Dill Mfg. Co., 700 E. 82nd Street, Cleveland 3, Ohio.

NEW PICK-UP

THE slippery tool or automobile part that slides from the mechanic's hand and hides in an inaccessible corner of the motor is quickly found with an ingenious retriever



called the Eriez Recovery Magnet. The pocket-sized magnet is put out by the Eriez Manufacturing Company, Erie, Pa., and sells for $11.95.

LETTERS

STARTING YOUNG

Dear Sirs:

I am only fourteen and have a driver's permit which allows me to drive when accompanied by an adult.

Your magazine is tops with me and others around here. I haven't missed an issue since your magazine first came out.

Do you possibly think you could get a feature write-up on Gaylord's Olds?

Thanks,
Fred Schmitz
Detroit 24, Mich.

Gaylord's Olds coming up VERY soon, Fred.—ED.

CORE AND TOP CHOP

Dear Sirs:

I am a great admirer of your magazine. I miss many issues though because the stores around here are usually sold out by the time I get there. Enclosed is my dollar for the next six issues of CAR CRAFT.

I would like to know if it is O.K. to put the top of a later date car on my '30 A coupe. If so how, and what kind should I use?

In the February '54 issue, page 36, you said that the radiator had a Chrysler core. Does this mean that you can fit the later date radiator into a '32 shell?

Jim Howell
Winnetka, Ill.

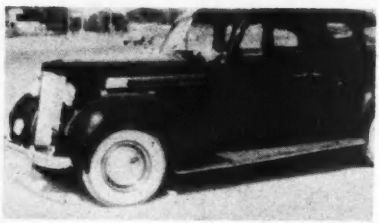
You'd be better off chopping the '30 A top, Jim. Any core can be adapted to the '32 shell but most need modification, either in length or width.—ED.

SO PROUDLY WE HAIL . . .

Dear Sirs:

I want to congratulate you on a splendid magazine. I've often wondered why some of these other auto magazines bother to sell to the American public with all the foreign articles and pictures they print! Yours is strictly American and I for one hope it stays that way!

Enclosed is a picture of my '39 Packard. I would like very much to see it in print



if at all possible. Its only modifications are a mild lowering job, a split manifold and homemade pleated and rolled upholstery, the latter contributed by able wife.

Thanks again for an American magazine.

Sincerely,
A/1c William Selchow
San Antonio, Texas

We're keeping pretty domestic and rooting in our own backyard for material, Bill, but don't let's forget that the foreigners have been known to bolt together some pretty hairy equipment at times. If it's wooly enough we can't ignore it.—ED.

MOVE TO IDAHO

Dear Sirs:

I've just finished reading your wonderful February issue of CAR CRAFT. In answer to Vincent DiAntonia's letter as to where he could get a driver's license and work on his car: In Idaho a person can obtain a driver's license at the age of 14 and I'm sure he could find a place to work on his car at some garage.

Just like Vincent, I guess I have the car bug too, and at the moment I'm planning to build an A-V8 roadster and would appreciate any information on the A-V8.

Thanks very much,
Dean Tredekind,
Moscow, Idaho

The December, 1951, issue of HOT ROD Magazine carried an excellent article on the conversion of the Model A to "bent eight" power, Dean. It should just about fill your needs.—ED.

'40 GRILLE

Dear Sirs:

I have been reading your magazine CAR CRAFT for some time and I think it's one of the best, however I would like to see more customs, since we don't have very many around here.

Recently I started to customize my '40 Ford, but have run into some trouble. I can't seem to hit on the right grilles; if any of your readers have any ideas I would greatly appreciate hearing about them.

Keep up the good work.

Yours truly,
Donald Remard,
Mastic, L.I., N.Y.

If you have the '40 Deluxe you can get a filled center grille from any one of several accessory houses. If you have the Standard model be happy with what you have or use a '39 Deluxe grille.—ED.

THE EYES OF TEXAS

Dear Sir:

On behalf of the people in the state of Texas, we would like to apologize for the '34 coupe pictured in your December issue. Not very many people in Texas have such a warped sense of design.

According to the article, the engine really seems great. From what we can see in the pictures the body work looks good, but from the firewall forward it stinks!! At least that seems to be the opinion of everyone who read the article, and saw the pictures.

Mr. Bott seems to mean well but that is no excuse for designing and building a monstrosity like he did.

We think Mr. Bott should tear out and build the front end completely different, then maybe he would have a sharp coupe.

We know there are many other customs in San Antonio that will outclass his with no strain.

Here's hoping this letter will soon be printed in your magazine. We would like to know if it is just *our* opinion.

With regards,
J. C. Williams, W. L. Spackler,
D. L. Trezise, and *other* critics.

Comments, anyone?—ED.

CHEV TUB

Dear Sir:

Congratulations! Your February '54 issue had everything. Keep it up.

I'd like to see two things in your magazine: first and foremost, I'd like to see some articles about the old "hot-engines" Chevy 4's, T's, and second, less Ford and Merc stories. There are other engines you know (I hope)!

For people like me that don't live in roadster-ridden sunny California, here's a recipe: take one slightly used '33 Chevy (or some other) sedan, decapitate it, notch the doors, lead in the trunk, add some paint after pounding out the dents and presto! You've got a five passenger roadster. It takes a lot of work. I know, I did it!, but it's worth it for the results. If you've got a torch it won't cost much ($300 with $38 of it for the original car).

I've added 3 carbs, dual exhaust, '32 intakes throughout, dual point ignition, and milled the head, but I'd like to see some how-to-do-it articles on such fundamentals as fullrace cam installation without a hoist, in your garage.

How about it?

Bill Malcolm
Arlington Hts., Ill.

Stuff like that coming up in future issues, Bill. Just keep an eye peeled.—ED.

(*Continued on page* 66)

interchangeability plus!

SOUPING THE '54 FORD FROM STOCKROOM PARTS

by Chuck Eddy

THIS is one case where we might be excused for carrying on like an advertising copy writer, but we'll try to restrain ourselves enough to give you the scoop on the power possibilities of Ford's new "Y" block V8's. To bring you up to date, we might mention that all of these new overheads are a culmination of a Five Year Plan. No, this isn't Russia—it just takes a long time to design and manufacture a complete family of engines. And, quite a family it is, starting with the baby 134 cubic inch OHV Industrial Four up to Uncle Lincoln, the group includes two Fours, one Six and five Eights. There are seven *basic* engines in this line and nine *distinct* engines, counting the variations in heads and manifolds on any basic engine to change its rated horsepower.

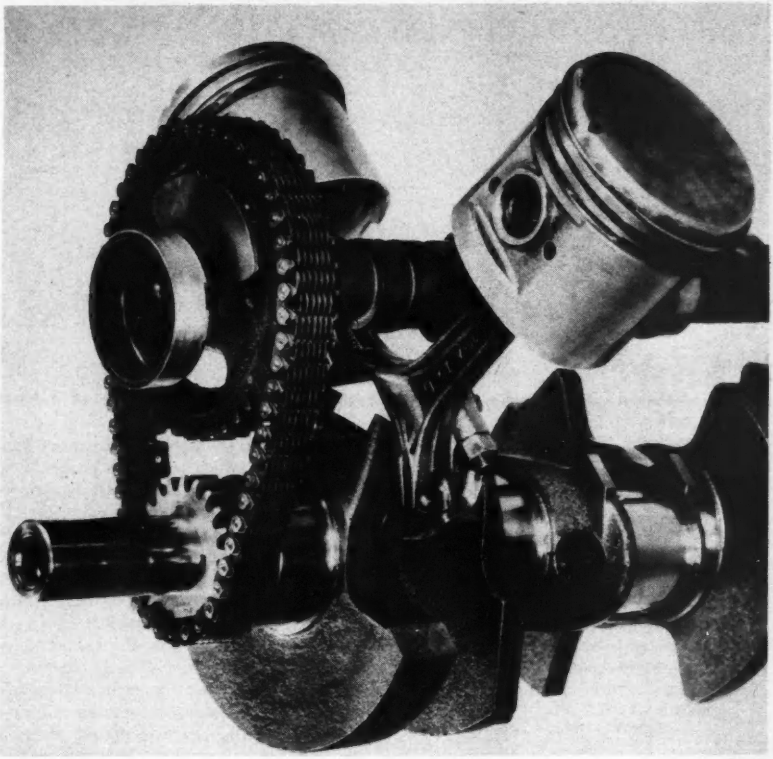
These family characteristics will be of more interest to CAR CRAFT'S readers when we show that they allow intriguing interchange possibilities to obtain more performance. On the old line "L" head engines, interchangeability of stock parts did not produce anything to compare with the versatility of these latest creations. As the smallest engines of the series deserve coverage of a different sort, and the six has been previously investigated, we'll concentrate on the latest V8's in the series, the 239 cubic inch Ford and the 256 cubic inch Mercury.

To start with, we should caution the reader not to expect too much out of the stock versions of either the Ford or Merc as neither is larger in displacement than last year's model. The intelligent reader will understand that low rpm performance is largely a matter of cubic inches and that neither of these engines are in a size class to compare with the 300 inchers. We know that irresponsible sales people might like to give the impression that your '54 Ford or Merc will take every "88" you tie into. If you expect to do this, you had better hang on for Stage Five tuning, otherwise known on the West Coast as Real Crazy.

Before we get specific with our modifications, let's get better acquainted with the design features of these two engines. Both are "over square" engines of 3.1 inch stroke, with 3.5 inch bore for Ford and 3.625 inch bore for Merc. Crank shafts, connecting rods, and timing chains, plus some other components, are common to both engines, in fact, bear identical part numbers.

BLOCK AND CRANK

Maximum block rigidity is obtained by hiding the crank shaft 'way up in the block and hanging it there with five identical main bearing caps, tied into the webs running down to the pan rail. All distances between

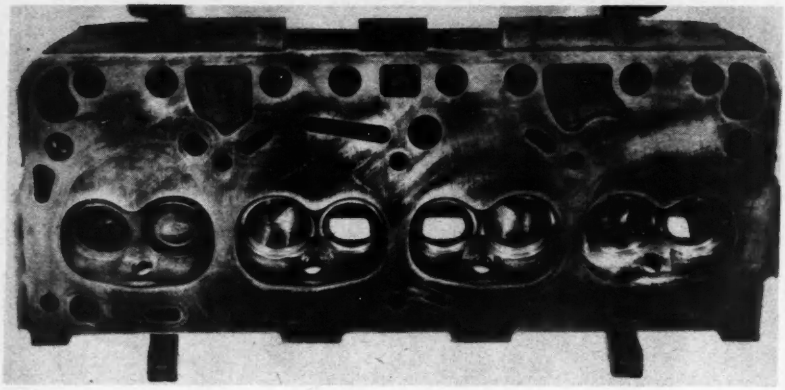


• *Arrow shows how close cheek of con rod comes to cam. Stroke increase is taboo.*

points of support are held to the minimum to aid rigidity. Three center main caps are 4⅜ inches apart; end caps are only 5 inches apart. Ford engineers have declared this basic design will welcome compression ratios in the 12 to 1 neighborhood, whenever competition makes their use necessary. As with all of Ford's cranks made within the last two years, this crank shaft is moulded of nodular iron. That's high-brow for fine grain cast-iron having "blobby" spherical nodules instead of more irregular shaped grains. The desirable result is a rigid, precise casting which, when machined, possesses exceedingly smooth journal surfaces.

Bearing failures do not ordinarily damage these cranks unless they are run too long after the babbit overlay is gone from the bearing inserts. These cranks ring like gongs when lightly struck and tend to be brittle. They should never be roughly handled nor stood on end because of danger of toppling over and possible fracture. We do not recommend any attempt to increase crank shaft stroke by grinding the journals off center. Grinding of the journals of any of these nodular iron cranks to a depth of 30 to 60 thousandths is inviting later failure, with other engine parts involved. Just don't try to stroke 'em! In normal use, the advantages far outweigh the above seeming disadvantages. Another feature worth mentioning is the addition of two counter weights, oppos-

(*Continued on next page*)



• **Look at the two center ports. Shortness of exhaust ports can be clearly seen here.**

(*Continued from preceding page*)

ing each other at the center main throw. This more fully counterbalanced shaft avoids most vibration periods common to those V8's not possessing this feature. Though the five main bearings are narrower and have less total area than the three mains previously used, they are much more effective. Less "cocking" occurs when the main bearings are closely spaced because of reduced crank shaft deflection under heavy loads.

CONNECTING RODS

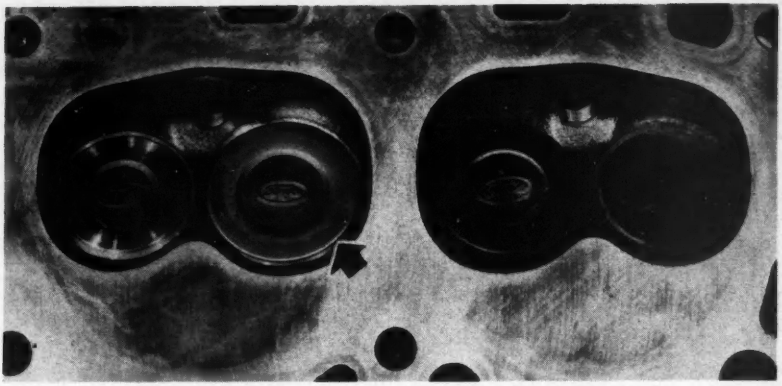
While the early V8 rods possessed a desirable lightness, their strength and durability was dependent on near perfection, metallurgically speaking (*Censored! Ed.*) Thin sections over their seven inch length produced "whipping" tendencies at high rpm under maximum loads. The new rod design attains more desirable characteristics by massive forged sections and relatively short length. Con rod bolt locations do not produce a notched, weakened section at the critical big end. Instead, Ford machines the recess as a radiused counter bore, leaving a strong web at the cheek of the rod. Both ends of the rods bear a lump of steel which allows full balancing and reduces stress concentrations in these critical areas. Piston pins are the same diameter throughout the engine family and have varying wall thicknesses to maintain reciprocating weights when used with various bore diameters. All rods have "squirt" holes which lubricate cylinder walls during starts, but do not function above a slow idle speed. These holes should never be plugged! Shot blasting is used to toughen the rod forgings and Ford uses 100% Magnaglow inspection to detect flaws. Little reason for concern in this department if reasonable assembly care is exercised.

BEARINGS

All connecting rod and main bearings are of the selective fit insert type. Use of combinations of color coded Red and Blue inserts allows fitting of all bearings to very close limits. We advise adhering closely to specification fits, even with maximum output engines, as clearances over 2½ thousandths will not decrease friction and tend to shorten bearing life. Use of Plastigage when fitting inserts is a must, as no other method produces accurate indication of true clearances. Little choice is to be made between passenger car or truck bearings, as we have found equal durability in both. Sulfur-bearing oil additives should not be used as they tend to corrode these copper-lead bearings.

PISTONS

These are of conventional flat-top, short-skirt design with cast-in steel inserts to control expansion of the solid skirts. Three rings are employed, the compression rings of the chrome plated type and the oil control



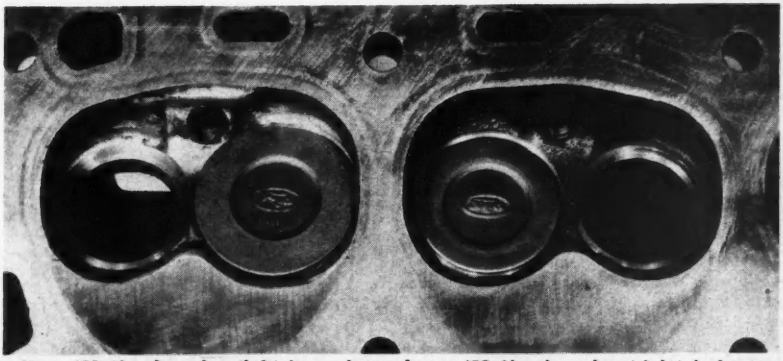
• ***Stock Ford exhaust and intake are same size (right). Merc intake is shown (arrow).***

ring using an expander. This expander is a new feature this year. Interesting is the continuous slot in the oil control ring *groove* to improve drainage at this ring. Three vertical struts rise from each pin boss to the beefy piston roof. Pins are offset ⅛ inch from the line of thrust to reduce "rocking," as they pass over top center. Below the pin bosses are balancing bosses which may be machined away to obtain "fine" balance characteristics. Standard piston pins are all .912 inch in diameter, allowing desirable possibilities in obtaining "coarse" balance characteristics by substituting thicker or thinner-walled pins used in other engines of the family. As previously mentioned, Ford and Merc pistons use different pins to obtain equal reciprocating weights. Oversize pistons will be available in .020, .030, .040, and .060 inch for each engine, and we definitely advise against exceeding the .060 inch oversize when acquiring cubic inches. It may be necessary for *you* to breathe to keep living but this phenomenon does not prolong cylinder wall life! As wall thicknesses in all these engines are controlled to about .260 to .280 of an inch, they get tired when they are made too thin by Big Bore Bennys.

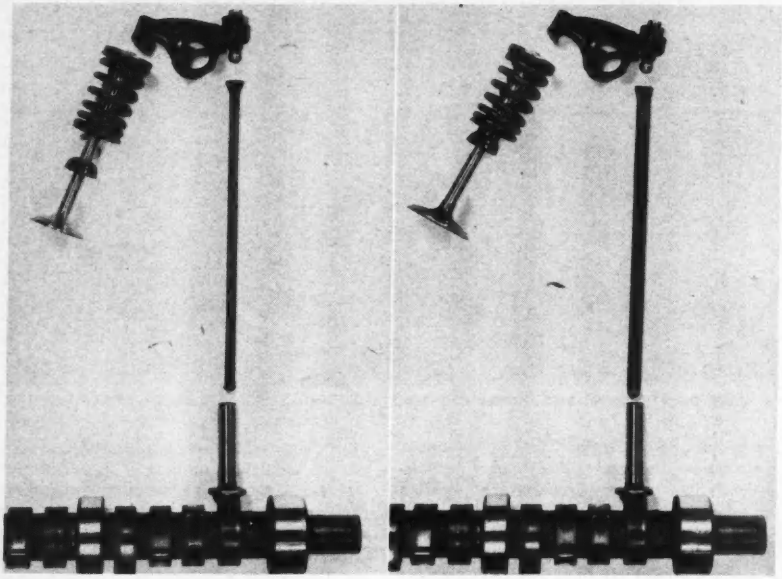
CYLINDER HEADS AND MANIFOLDS

Though both Ford and Merc manifolds are the same basic design they embody minor but important differences. Most interesting

(*Continued on next page*)



• ***Huge '53 Lincoln valve (left) is much too large. '52 Lincoln valve (right) is better.***



• *Exploded view of stock Ford valve train shows simple, easily adjusted components.*

• *'52 Lincoln valve and shortened Willys pushrod make substitution for stock items.*

(*Continued from preceding page*)

feature is the double-deck intake ports. The purpose here was to obtain the same length passages from the carburetor to the intake valves to equalize fuel mixtures to all cylinders. This novel arrangement includes smooth passage curvatures to avoid fuel condensation or "drop-out" due to velocity changes. Somewhat unsuspected is an area difference between the Ford and Mercury manifold passages. Although the variation in internal dimensions does not preclude the use of the Merc Manifold and carburetor in the Ford heads, it points up the fact that port matching may become a problem if larger Merc manifold ports form a ledge over smaller Ford head ports. The Mercury ports have an area of 1.42 square inches each against Ford's 1.29 square inches. Accordingly, the Mercury passages could flow about 110% of Ford's manifold capacity while moving only 107% of Ford's displacement. Without drawing any wild conclusions, this indicates that the Mercury combination is much more desirable for allout power production. This is also a small factor in the higher hp/cu. in. Additionally, it might be pointed out that considerable labor would be involved in grinding about .040 inch out of the Ford passages to equal the stock Mercury.

In the heads we discover further clues to the power problem. Specifications for combustion chamber volume agree to within one cubic centimeter, or less, on the two heads. This is easily accounted for by the fact that Mercury's 7.5:1 C.R. requires a proportionally smaller combustion chamber for its 256 cubic inches than Ford's 7:2:1 on 239 cubic inches. Thus we find no profit in ratio gain as was the case on the "L" head engines when Ford heads were installed on the Merc short block.

VALVES

Valve sizes further indicate design intentions of the two engines. The EBU Ford engine employs 1.65 inch diameter intakes,

(*Continued on page 56*)

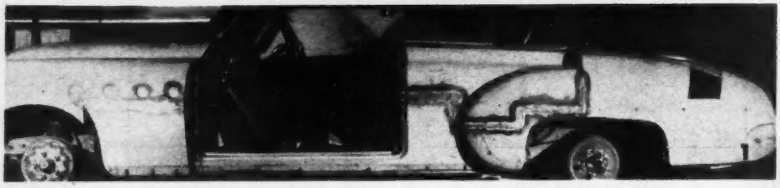
TUNING IN EASY STAGES FOR 1954 FORD AND MERCURY V-8'S

	HEADS	PISTONS (BORE)	DISPLACEMENT	VALVES INTAKE	CARBURETOR	MANIFOLD	CAMSHAFT	IGNITION	OUTPUT ESTIMATE
STAGE I (MILD)	Mill .050" Clean combustion chambers. Match ports.	Stock EBU 6108. Leave 'em alone.	Stock 239 cu. in.	Stock—Check seating and spring tension.	Stock—EBU 9510 Two Throat	Stock EBU 9425 Match Ports	Stock EBU 6250-B 232° Dur. or grind to 244°	Stock FAE 12127A Ford	140 HP @ 4200-4400 RPM About 8:1 C.R.
STAGE II (WARM)	Mill .050 to .070" off EBU heads. Match ports.	.060" O.S. 3.56" dia. '52 6 cyl. EAA 6108.	246.5 cu. in.	EBP—6507E 1.785" diam.	EBZ 9510 "256" Truck Two Throat	EBZ 9425C "256" Truck Match Ports	Stock EBU 6250B ground to 244° or 256° Duration	Stock FAD 12127B Springs calibrated for EBZ carb	155 HP @ 4200-4400 RPM up to 8.2:1 C.R.
STAGE III (BOMBITA CALIENTE)	Mill .080" off EBZ 6049 truck heads. Polish.	3.56 dia. EAA 6108 6 cyl. pistons.	246.5 cu. in.	EBP 6507E 1.785" diam. Lighten & Polish.	Merc EBY 9510 Four Throat	Merc EBY 9425 Match Ports	EBU 6250B Must use with EBU 6010E Block, Regrind	Merc FAE 12127C springs calibrated for EBY	160-165 HP @ 44-4800 RPM up to 8.5:1 C.R.
STAGE IV (MERCURY CALIENTE)	Mill .070" off EBY 6049 Merc heads. Polish Chambers.	3.625" Stock EBY 6108.	256 cu. in. Upper limit SCTA "B" Class.	EAM 6507E 1.82" dia. Lighten & polish.	Merc EBY 9510 Four Throat	Merc EBY 9425 Match & Polish Ports	Merc EBY 6250 262° dur. EBY block only	Merc FAE 12127C springs calibrated for EBY carb	180-190 HP @ 44-4800 RPM up to 8.75:1 C.R.
STAGE V (REAL CRAZY)	Mill .070" off EBY Merc heads. Match & polish ports.	.060" over Merc EBY—6108. 3.685" diam.	268 cu. in.	EAM 6507E 1.82" dia. Lighten & polish.	Lincoln EAD 9510-M Four Throat	Merc EBY 9425 Match & Polish Ports	Reground Merc or stock EBY 6250	Merc as above with springs FAA 12225-A and FAB 12225-A	210-220 HP @ 4500-5000 RPM up to 8.75:1 C.R.
STAGE VI (GONE!)	Stock Merc for use with compress. raisers.	Special 3.685" with contoured lobes on top.	268 cu. in. (within FIA & SCTA "C" Class)	EAM 6507E 1.82" dia. Lightened & polished.	Multiple Carbs 3 duals—1" throats 2 duals—1¼" throats	Stock Merc—Machined, or Cast Aluminum, later Available	Stock Merc. slightly Reground or Billet shaft 292° dur.	Centrifugal advance, vacuum retard, Two coil type	250 HP @ 4800 to 5600 RPM Comp. Ratio 9:1

HERE'S HOW

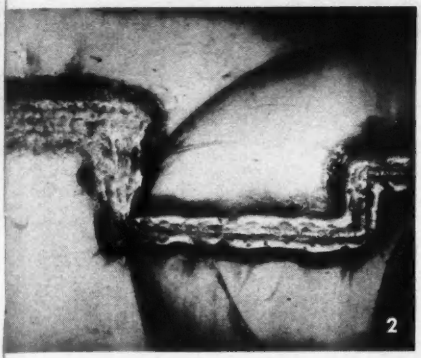
BODY SECTIONING PART II

By Dana Mooring—Photos by Bob Behme



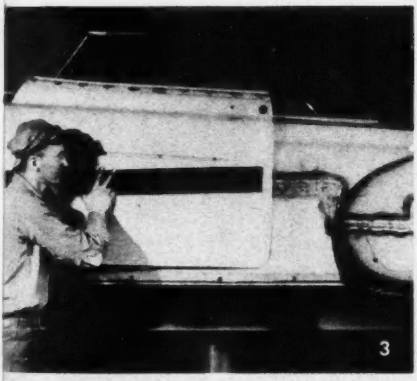
HERE'S the second semester of our two-part lesson in sectioning. The Olds has been chopped apart and is now ready to be glued back together. What follows here is the story of how one does this little job without having any necessary pieces left over and without having the wheels scrubbing on the tops of the fenders. Our title photo shows what the finished item looked like when Jack Stewart drove it home. Since our prime purpose here is sectioning, we won't go into all the finish work but will save our space for the actual sectioning operation.

1. For the hammer welding operation: weld 1½-inch sections of the seams with steel rod, then alternately heat and hammer the weld until the weld fuses with the panel metal. Take an area of the seams about 1½-inch wide, after welding, cut the torch to medium flame, reheat the seam and the surrounding metal to a cherry red. Move the flame constantly to avoid over-concentration of heat. Have someone hold a dolly flush and tight against the rear side of the panel. Hit the hammer on the outer side in the same place repeatedly until the weld is compressed to the same gauge as the surrounding metal.



2. Sometimes while hammer welding, a section of the panel will bulge or buckle. This warp must then be shrunk to the original contour. This is done by heating with the torch an area about the size of a dime. The dolly is held against the back of the bulge and hit from the front. This compresses the area. Cool the area with a cold sponge. This will then shrink an area about one inch square. After the rear panels have been hammer welded, the front fender is replaced and tack welded.

3. The door panel section which has not been sectioned shows the difference in width. At this point the quarter windows are installed. Since the distance between the sill and the base of the car is four inches less, it is necessary to relocate the drain pipe to permit full opening of windows.

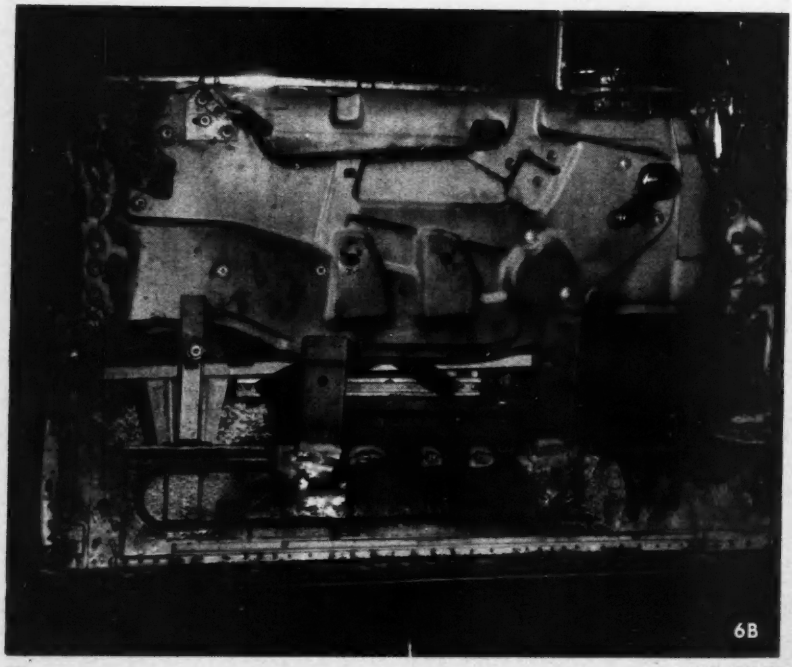


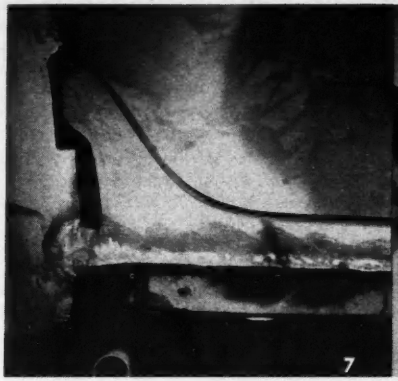
4. First step in sectioning the door panels is to loosen the inside panel. It will be necessary to use the torch in some places. Loosen by chisel where it is not bolted.

5. Cut through the upright door panels. This chops the door in half. Square the seam, rejoin the two sections, and tack weld together.

(*Continued on next page*)

6. After the door has been checked for body placement, use clamps to secure the two parts together. Next, hammer weld the two pieces. Sectioning of the inner door-panels consists of cutting the upright bracings four inches. This doesn't affect the winding mechanism. Next, the liner is welded, the door hung, and the windows installed.



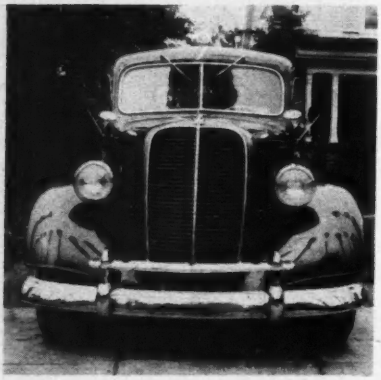


7. The trunk panel is then rejoined and welded at the seam. Fender is ready for taillight installation. The gravel pan is bolted and welded flush to the trunk panel. To provide sufficient material for a new contour, sheet metal is added to the flap. The flap is heated and bent to the trunk panel where it can then be welded.

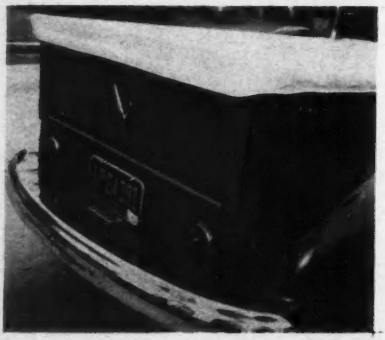
8. Removed prior to sectioning, the wheel well is raised closer to the top of the trunk and welded. The top of the wheel well is kept as high as possible to provide maximum space for wheel deflection.

9. View of the wheel well from the underside shows the lowering effect of the body sectioning. Although weld seams are not usually seen from the underside, they can go a long way in selling a customized car when they are neat.

• Body of 107 mph pickup is essentially stock except for minor trim replacement.



• Grille remains stock but bumper is a Cadillac item with special grille guard.



ONE bright Sunday, not too long ago, a flaming red '37 pickup truck rolled up to the starting line at the Santa Ana Drag strip, Orange County Airport, near Santa Ana, California. Marked plainly on the side was a letter designation which said that the truck had been entered in the heavy coupe class. The owner-driver was listed as George Smith, of Paramount, California.

The only clues which might have led the beholder to believe that the truck was other than it seemed were two three-inch vertical

COVER CAR
TARPAPER

• Rear gravel guard is moulded into fenders and custom bed made from Jeep bed.

exhaust stacks poking up at either rear quarter of the cab, burbling with a deep, quiet mutter.

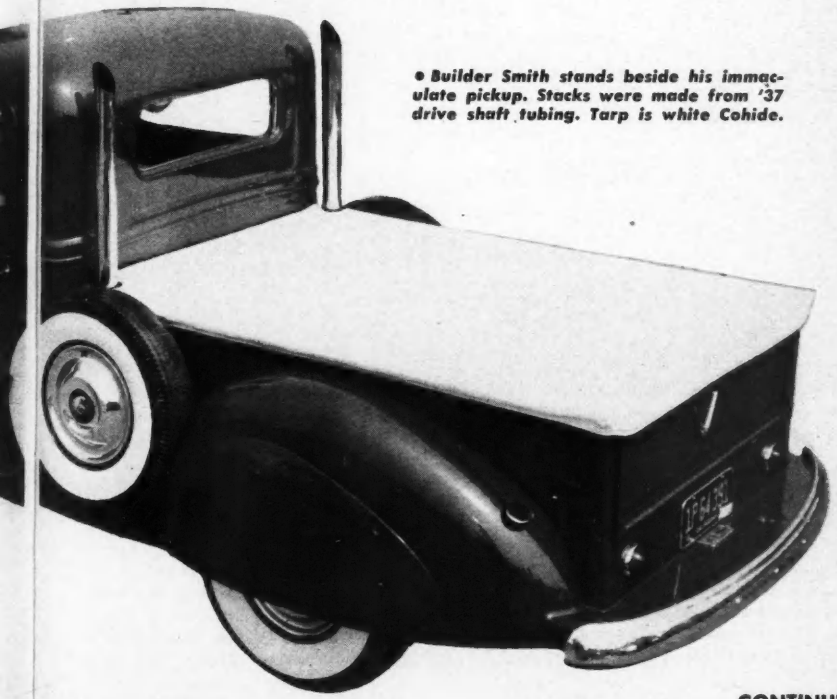
When the flag dropped, the exhaust note changed to a deep, powerful roar and with a scream of tortured rubber the truck barreled down the strip. The end of the run was the payoff—106.38 mph, a new record for the class. Obviously this was no ordinary '37 pickup. Since that time the pickup has upped its record to 107 mph.

A peek under the hood let out the secret. Filling every inch of available engine room space was a full-house, glittering Cadillac engine. This hulking mill has been given the full *go* treatment. The block is a '49 model, bored out to take four-inch Howard pistons and equipped with a quarter-stroked Miller crank. Jiggling a set of oversize valves is a Howard M-5 cam, a very special item, indeed. Heads are from a '53 Cad and have been given the full port treatment combined with a milling job of .050 of an inch.

(*Continued next page*)

TO TARMAC

Photos by
Felix Zelenka



• Builder Smith stands beside his immaculate pickup. Stacks were made from '37 drive shaft tubing. Tarp is white Cohide.

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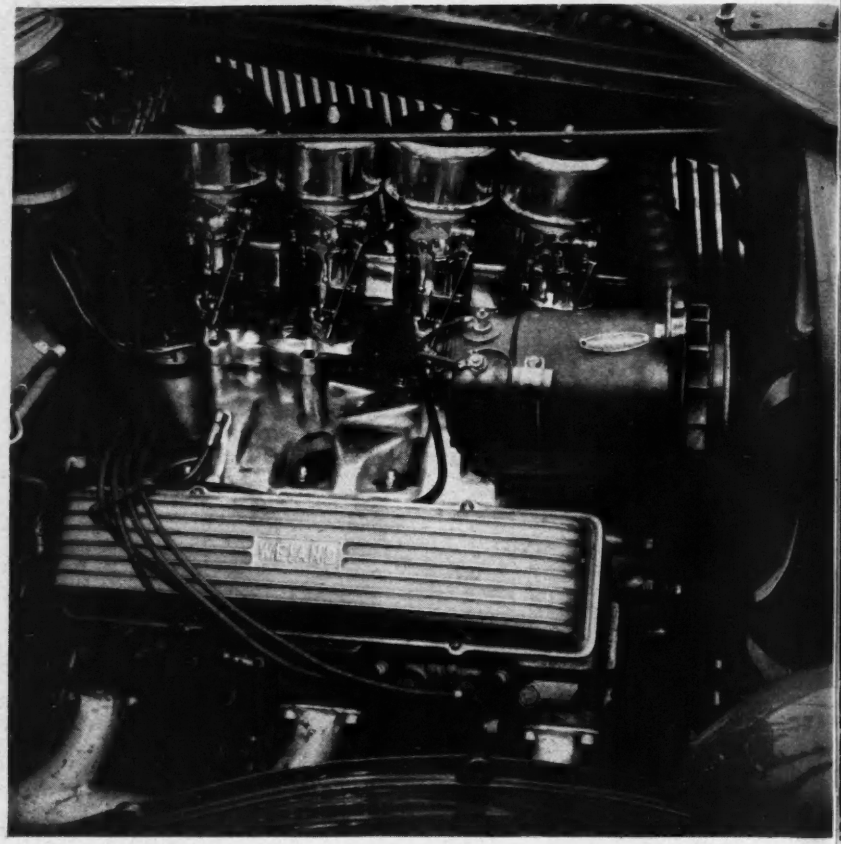


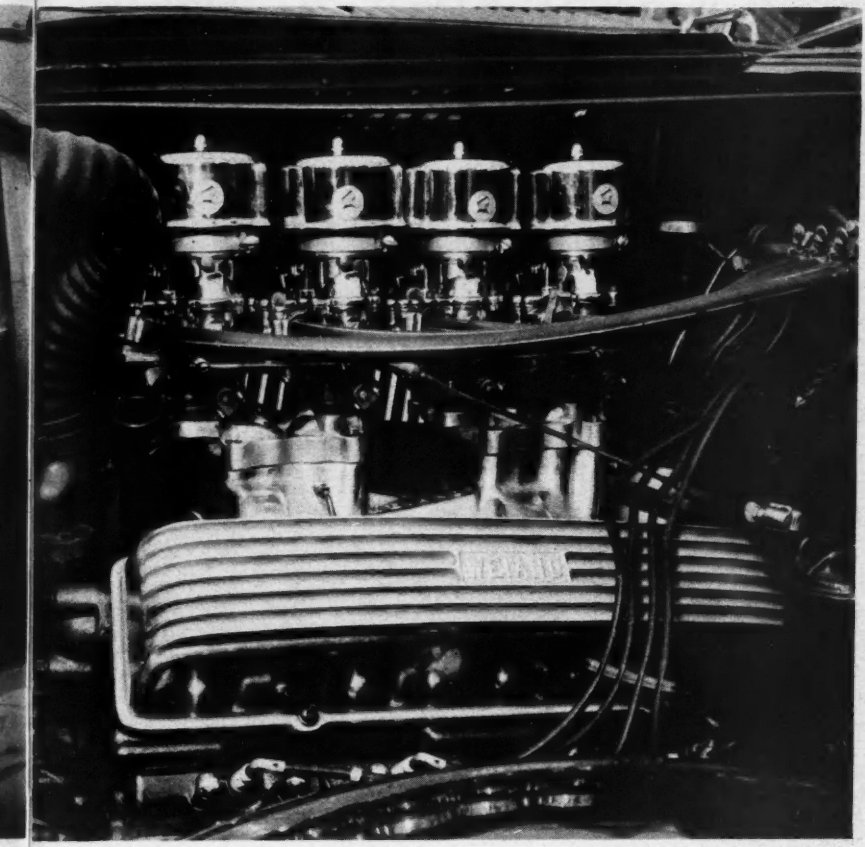
• All electrical equipment has been converted to run on 12-volt system. Ignition is supplied by Scintilla Vertex magneto, coil at left supplying starting impulse to mag.

(*Continued from preceding page*)

Zephyr valve springs, shortened by one ring, keep the valves seated.

Perched on top is a Weiand dual quad-jet manifold adapted to take four Stromberg 48 carburetors. Spark is supplied by a hefty Scintilla Vertex magneto. The rest of the electrical equipment has been converted to 12 volts, starter, generator, lights and twin Bendix fuel pumps all operating on the upped voltage. Just a shade over 235 horsepower is delivered to the rear wheels through a '37 Cadillac floor shift transmission and a '50 Ford, 4.44 rear end. Drive shaft is of the open tube type.

The truck was originally purchased by George from a roofing contractor. The thing



• Weiand dual quad-jet intake manifold has been adapted by 'Y' adapters to take four Stromberg 48 carburetors. Fuel is boosted by two Bendix electric fuel pumps.

was a mess, covered with tar and roofing compound from one end to the other. The contractor asked for, and got, $135 for the truck as was.

George set to work scrubbing the bear clean and stripping the paint. The original pickup bed was removed and a new one fabricated from aluminum channel, two-inch angle iron and Jeep truck side panels. The floor of the bed was finished with marine plywood. Every bit of the body was sanded clean and then the whole thing was primed and sprayed a brilliant vermillion.

The cab was then gutted and given a new upholstery job in red and white Cohide by Kenny Mulhern, a buddy of George's. A white Cohide tarp was fitted over the bed

(*Continued on page 25*)

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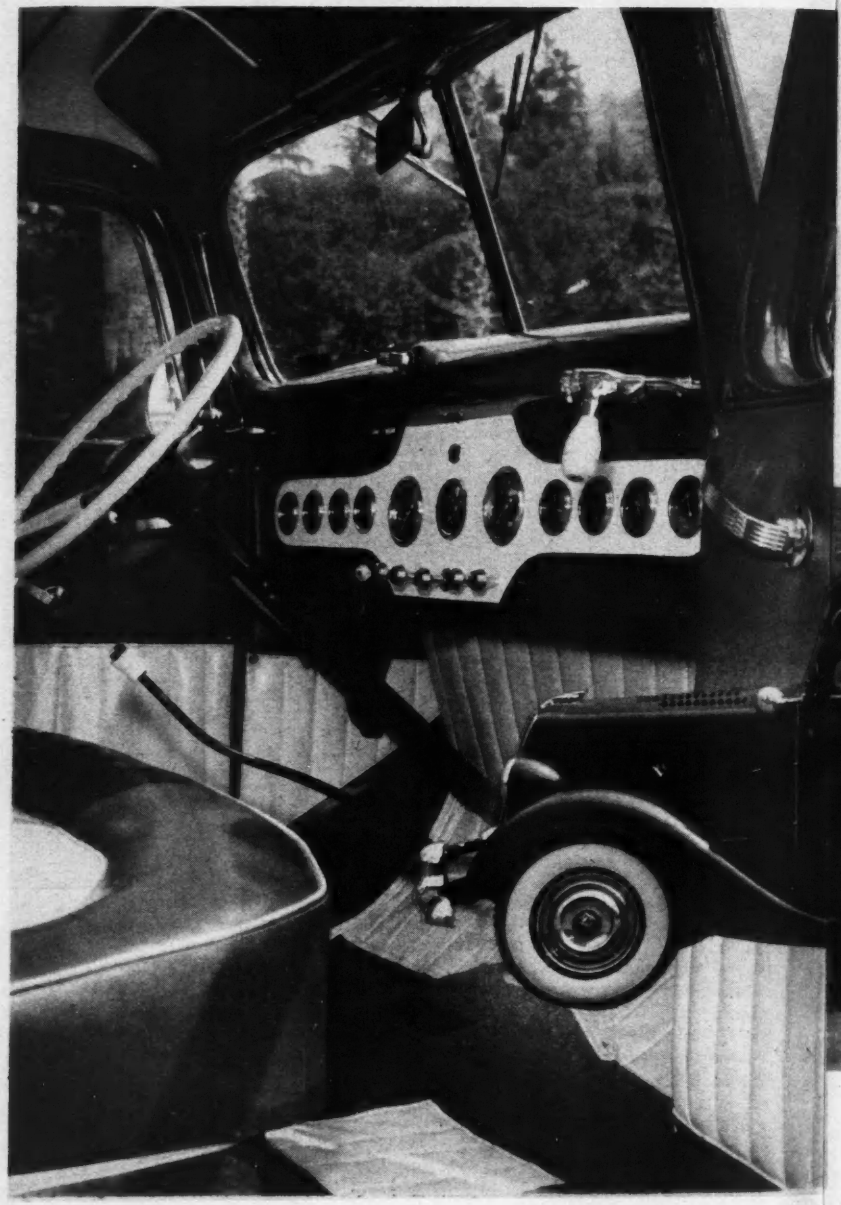


TARPAPER TO TARMAC continued

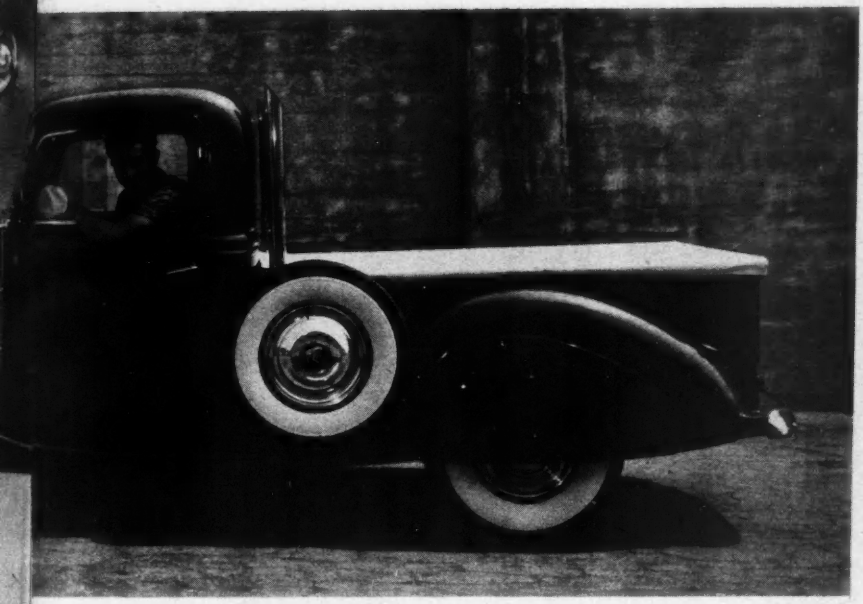
(*Continued from page 23*)

and a white and red floor rug was made for the cab. George then built a sheet metal dash panel and fitted it with a complete array of instruments including a tachometer, speedometer, two heat gauges, oil temperature gauge, oil pressure, fuel, fuel pressure gauges and an ammeter. Topping off the externals were the aforementioned exhaust stacks which were made from chromed '37 Ford drive shafts.

The pickup was no one-shot proposition. George has been building neat machinery for some fourteen years, teaching himself bodywork in the process. He now runs a part time body business in his home garage, and has built two similar trucks for envious friends. Could be that he's embarked on a full time business unwittingly. He'll duplicate his own job, or sell it, for $3500.

Anybody wanna buy a 107 mile-an-hour truck; for Mexico, maybe?

LEFT—Interior of truck cab has been given the full treatment replete with red and white Cohide upholstery and matching rug. Eleven-dial instrument panel is special.



Lowered clearance of Smith's pickup was accomplished merely by the weight of the engine on the front. Five-inch shackles combined with a heavy sway bar lowered rear.

FORDOMATIC III

FINAL ADJUSTMENT ON THE REWORKED TRANSMISSION

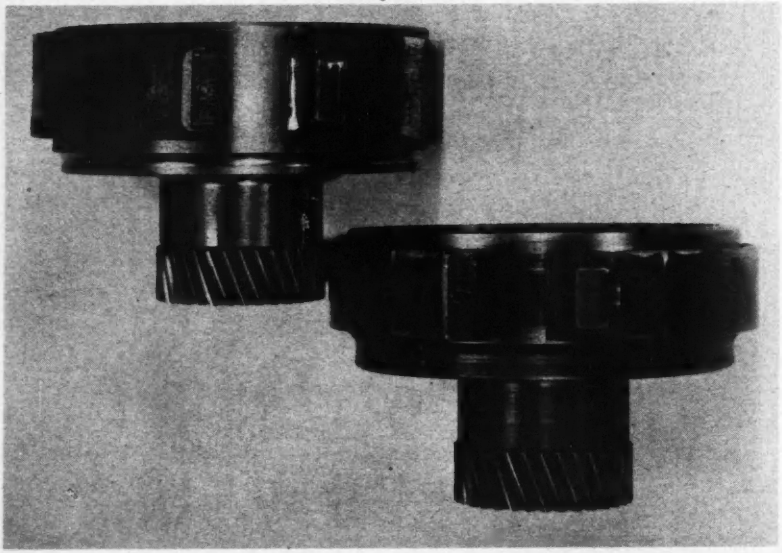
SINCE the last installment, Ford has incorporated several interesting improvements in the Mercomatic Transmission. As the Ford Police Interceptor employs an engine basically the same as the Mercury, these improvements are incorporated in the Fordomatic when used with the Interceptor. As the objective of these improvements was to obtain a more positive front band application thru generally higher pressures, we can see that they should therefore accomplish desirable results for *any* powerful engine installation.

Let us examine the changes, with the possibility of further "urge." We will enumerate the changes and explain the significance of each one.

HIGHER CONTROL PRESSURE

Obtained by substituting a shorter, but stiffer control pressure regulator spring, PAD-77463-A for 1P-77463-A. Sharp-eyed readers will realize that this is the spring that was *not* recommended for use because of the more brisk initial applications that it produced.

Photos by Bob D'Olivo



• New wide band and front drum (top) are shown compared to type used in '53 unit.

However, a change in the front servo regulator in the new valve body, PAE-77700-A, takes care of the higher initial pressure and sufficiently cushions the band application. This control valve body may be distinguished by the letter "M" on its cover.

ADDITIONAL FRONT BAND HOLDING POWER

This has been obtained by an increase in front band width from 1¼ inch to 1⅝ inch and a wider (1$^{15}/_{16}$ inch) front drum upon which it applies. The new, wider parts are designated 1P-77370-B, front band and 1P-77502-E, front drum and secondary sun gear assembly. In addition to the higher pressures mentioned above, a larger apply area on the front servo piston adds to the total braking force. Three parts substituted here will accomplish the full modification. They are PAE-77358- Piston, PAE-77361-A, "O" ring, and PAE-77364-A, Piston retainer.

It must be emphasized that these modifications are interdependent and substitution of any of them without all of them may produce undesirable results.

Pressure readings obtained with the above modifications will be the same as on the 1953 *Truck* Fordomatic. Here is a tabular comparison to give you some idea of the extent of the pressure changes:

1953 Fordomatic & Mercomatic	
Selector in Dr—	
0° Throttle lever opening	60-80PSI
Point of Maximum PSI (10½° or above)	120-145PSI
Selector in Lo or R—	
Minimum PSI—0° Throttle	60-80PSI
Maximum PSI (@ 7½° or above)	140-160PSI
Author's Modifications Produce: (Selector in Dr, Lo, or R)	
Minimum 0° Throttle opening	60-80PSI
Maximum 4½°-7° Throttle opening	150-165PSI
Point of Pressure Rise (15PSI "jump") at 4° Throttle lever opening.	

1954 Mercomatic (also all Trucks)	
Selector in Dr—	76-96PSI
Maximum PSI	134-160PSI
Selector in Lo—	76-96PSI
Maximum PSI	154-186PSI

SIGNIFICANCE OF LINKAGE

The above pressure readings are significant only if we appreciate the fact that when the *engine* is at *idle*, low pressures are desirable and when *under load*, pressures must rapidly *increase*. To signal the transmission what the engine is doing, a mechanical linkage is employed. Adjustment is important so that between the carburetor feeding the engine, and the control valve body bossing the transmission, we do not mix our signals. Beside telling the pressures to increase, we must also be able to "kick-down" the transmission from Hi to Intermediate. This requires maximum throttle linkage movement and ordinarily should occur just before the accelerator pedal compresses the floormat. *Pressure rise*, however, can safely occur just *after* we start to depress the accelerator but should *not* occur at idle rpm. As a quick but effective check of both linkage adjustment and its effect on the valve body the following procedure will suffice.

For these figures, the installation of a tachometer and 0-200PSI test gauge are necessary. Permanent installation of both of these instruments is recommended by us as the quickest way to "savvy" this control system. However, if you are just checking, hookup the instruments temporarily. The gauge line should adapt to ⅛ inch pipe, female, and be plumbed into the hole in the front of the case on the left side, just above the throttle and manual levers.

Start the engine, set parking brake firmly, put selector in "Lo." With the engine idling, 450-500 rpm, pressure should indicate as in the table above, opposite "0° Throttle lever opening." Using a machinist's square, measure from the top of the accelerator pedal to the compressed floormat. Take the first reading after depressing the accelerator just enough to take out linkage slack *without* speeding up the engine. This measurement should be about 3¾-4 inches. However, the total distance is not as important as the *change* in distance. Thus, for an additional ⅜ inch movement of the accelerator, the pressure gauge should show a rise of at least 10 PSI above the pressure on the

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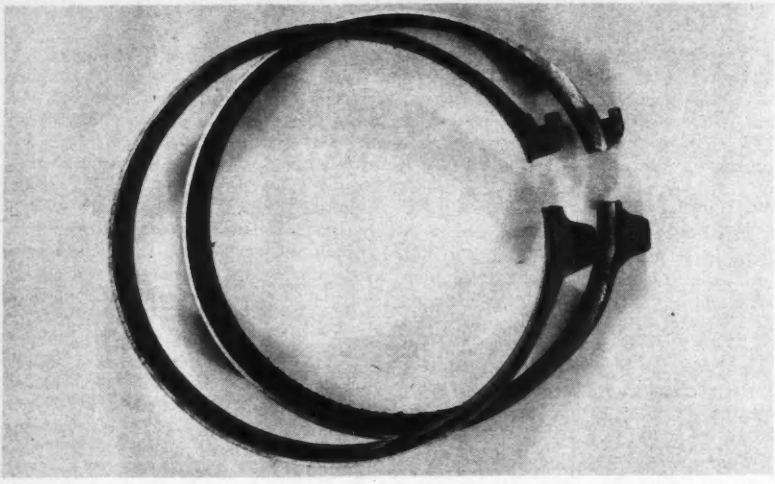


• ***Heavier ends of new band can be seen at right as compared with old band (left).***

FORDOMATIC III *continued*

first reading. Next, watching the tach., repeat the above accelerator movement, without the square in place. The same definite rise point should occur by the time the engine reaches 1000 rpm and should attain *maximum* pressure readings by 1200-1300 rpm. All of this, remember, is done in Lo or R with the brakes on. If your parking brakes won't hold this test, fix 'em or put the car against a brick wall! Stop the engine and measure the total accelerator pedal movement from the "slack removed" point to the floormat position. If the *difference* between these two measurements will not produce an effective pedal movement of at least two inches, linkage adjustment must be made to provide more pedal travel. As normal wear in the pin joints, usually employed in the linkage train, robs movement from the last point in the system, we recommend substitution of ball and socket joints, wherever possible. Ford assembly, AE-9784-A, will furnish two usable sockets which may be substituted at pin joints by cutting and threading the 3/16-inch rods of the linkage. Elimination of slack throughout the linkage improves the "feel" at the accelerator and improves the coordination between throttle butterfly opening and transmission response.

ENGINE CHARACTERISTICS

Your first objective in engine modifications should be to increase the engine's torque. As it will be remembered from Fordomatic I, this will force the converter to multiply torque by "twisting its tail" harder. While we have no quarrel with the "300-inch" boys about the easiest way to get torque being the size of the engine, maybe you are stuck with 239 cubic inches. If you are, and can't bore or stroke, at least get more torque by milling the heads. We won't go into too much further detail here as we have already done so in the accompanying engine article about the new Ford engines. However, these salient points should be noted:

A. Engines which perform best with automatics, regardless of size, are those possessing the *flattest torque curves.*

B. Maximum hp obtained above 5000 rpm is of little use to a transmission designed to shift into Hi gear automatically at 3800-4000 rpm.

C. Little benefit is derived by staying in Lo gear above 5000 rpm, as some power is

thereby lost in the rapidly spinning rear clutch discs.

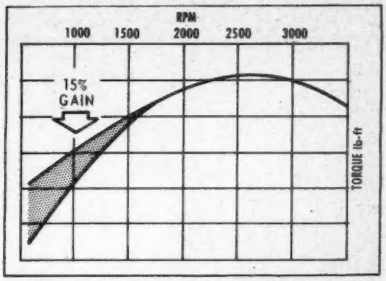
D. Shifting back into Intermediate by moving the selector to "Lo" position above 65 mph, should not improve acceleration with an ideally modified engine.

E. With the desirable flat torque curve, the rpm drop upon the shift to Hi at 56-67 mph should actually improve torque output.

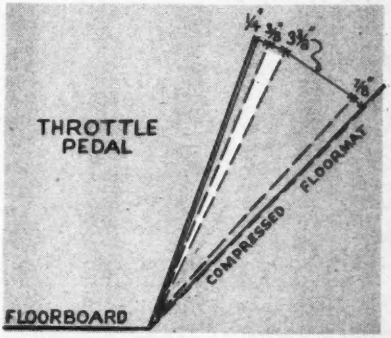
Both '54 Ford and Merc engines are good examples of the type of engine which works well with the automatic. Personally, we expect our Stage V jewel to perform very creditably ahead of a carefully Merc-Eddified '54 Fordomatic!

To recap our suggestions in the Fordomatic series, consider our parting advice:

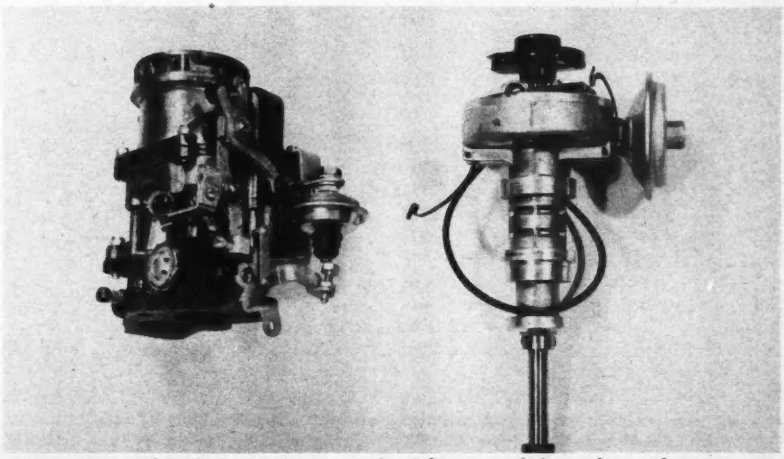
1. Get a reliable Fordomatic or Mercomatic specialist to do the work.
2. Furnish to him these issues of CAR CRAFT. (*Make him buy his own!—Ed.*)
3. Ask him to consult Ford and Mercury manuals. (Which he should have if he's as sharp as he claims.)
4. Insist on Applied Cleanliness!
5. See that he follows a logical sequence of inspection and pays particular attention to journal finishes, fits, seals, and mating surfaces.
6. Don't let anyone tell you an automatic won't go, but you can't get performance for nothing!



• ***Flat torque curve of '54 OHV Ford V8 is well suited for use with Fordomatic.***

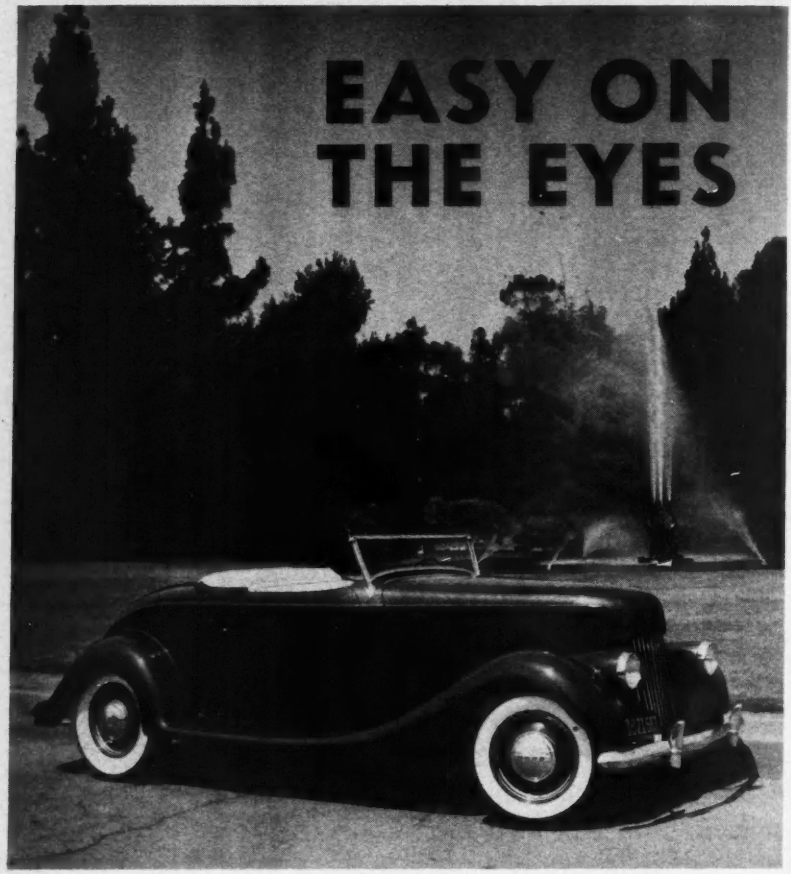


• ***White area in diagram shows throttle movement to get 10 lbs. pressure rise.***



• ***Carburetor and igniter operate as a unit. Valve on carb base slows advance curve.***

EASY ON THE EYES



• ***The solid compact appearance of '34 is largely due to trim removal and filling-in of body components such as: hood nose, hood side panels, deeply valanced rear fenders***

IT has been somewhat truthfully said that if a thing is out of the ordinary it is bound, sooner or later, to show up at Sunset and Vine, that intersection which is the heart of the collection of pleasant insanities that make up Hollywood.

The favorite eatery patronized by the CAR CRAFT staff occasionally closes for a well deserved rest, forcing us to forage elsewhere. On one such occasion we had wandered down to the intersection in search of a hash house whose prices would leave us solvent when we spotted a sassy looking little '34 parked alongside the right of way.

Casting about for an owner produced nothing but a few unimportant movie stars,

Photos by Bill Southworth and Eric Rickman

two producers and a director or two, none of whom had any information worth noting. We tossed a card on the seat of the car and went on about our search for groceries.

A few days later the little jewel, with owner Bill Scown at the helm, came to a halt in front of the office, causing a small furor among the staff members who were '34 vintage alumni.

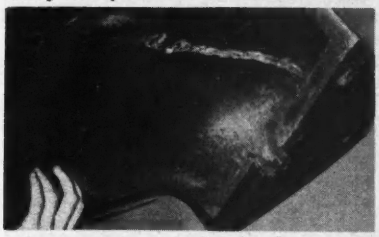
Bill unfolded the story of how he first procured the car from the back row of a secondary used car lot. The previous owner had already started the basic body work, but apparently had been forced to discontinue the job and unload it for his time and efforts, leaving the unfinished body components in a fairly brutal condition.

Cogs began turning in Bill's mind as he stood viewing the unfinished work and, by next morning, the '34 found itself quietly nestled in his garage workshop next to his other two prize possessions, a '51 Caddie with a full-house mill and a Jimmy powered Hollywood Graham.

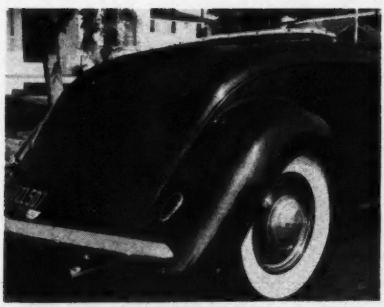
With some nineteen years of spare time auto building behind him, it wasn't long 'til Bill had brought the small fire engine red bomb to its present immaculate condition. Used to haul him to and from his home in Newhall, California, to his optometry practice at Sunset and Vine, his only comment on his new toy was, "Who the heck is going to drive the Caddie now?"

• ***Strap iron crossmembers have been installed to hood to attach homemade hinges.***

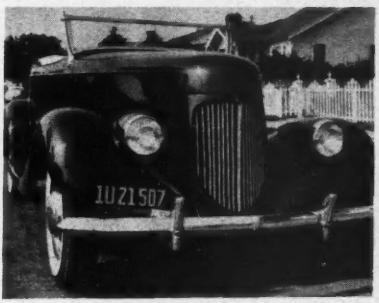
• ***Under cowl, hinge pivots from a special heavy iron perch that is welded to cowl.***



• ***Custom-made nose for hood was constructed from 18 gauge sheet metal, spliced on near the hand. A cable latch is used.***

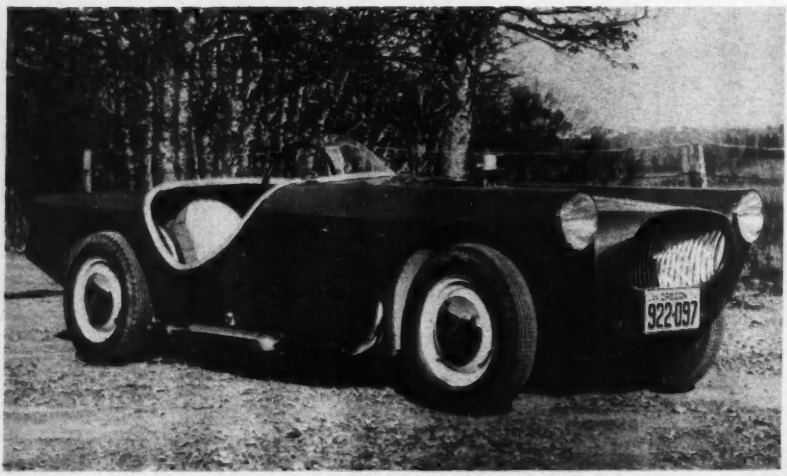


• ***Body sheet metal was used to valance fenders and matching rear body pan. Tear-drop taillights are from '38 Ford.***



• ***Sleek blending headlights are from '40 Chevy. Hood side panels are stationary, top of hood lifts as in late model car.***

from past performance this Crosley could be said to be... **POISON**



• In its earlier form, Eyerly car sported single exhaust, now has four tuned stacks.

it—Harry Eyerly in the Crosley. He had moved from 24th spot to second, passing three rapid Porsches and 19 other various makes, in less than one lap! This required investigation into the whys and wherefores.

Harry's acquaintance with Crosley components was not new at the time he started to plan and build his car. He had but recently retired from racing 48 cu. in. Hydros in which the Crosley engines were used extensively. In fact, his car was designed about the same power plant that was used so successfully in his racing boat.

Since the power plant was only 48 cu. in. Harry realized that in order to get any performance from it the chassis and body would have to be "super light," but at the same time extremely rigid. He selected 2⅜ OD tubing for the chassis, and used ⅝ tubing to build the body frame. This he covered with panels of .032, 24 ST aluminum sheet, using self-tapping sheet metal screws as fasteners. Body panels were designed so as not to embody any compound curves.

The front axle was taken from a Crosley

(*Continued on page 35*)

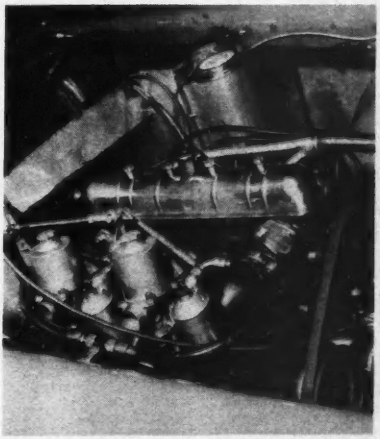
FOR PORSCHES

Photo Story by
Peter Sukalac

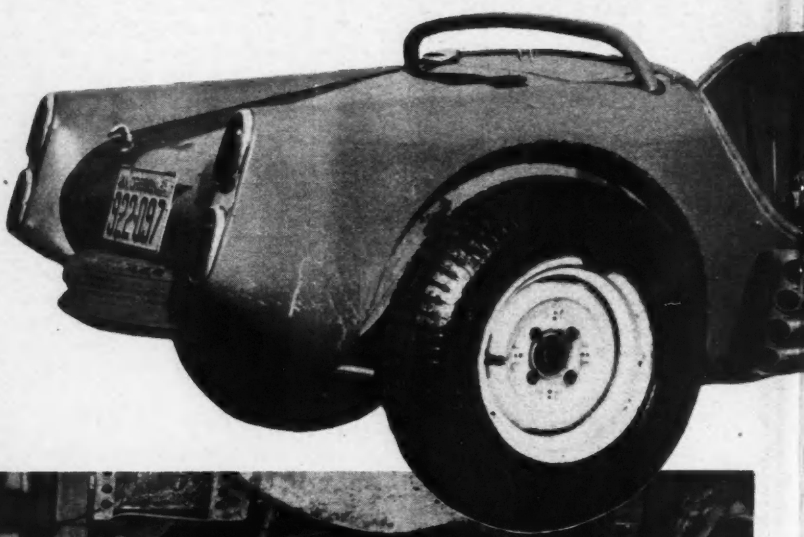
AT this writing there have been more than a dozen Crosley Specials constructed across the nation. But, all of them, regardless of fancy bodies and reworked engines, have been only lukewarm performers in competition. The one exception to this pattern has been the Eyerly Special, designed and constructed by Harry L. Eyerly of Salem, Oregon.

The first time we saw the little bear was at the Golden Gate Park race in San Francisco a year ago. Having seen Crosleys before we were interested, but a cursory inspection hadn't given us to expect miracles. The race officials put all the slower cars in the rear and, noting that Number 54 was a Crosley, had put it in dead last position. Four Porsches were solidly in the first two rows.

The flag dropped and the whole pack tore off around the first turn. Two minutes later the first Porsche came around the last turn into the home straight. Right behind, practically bumper to bumper, was—you guessed

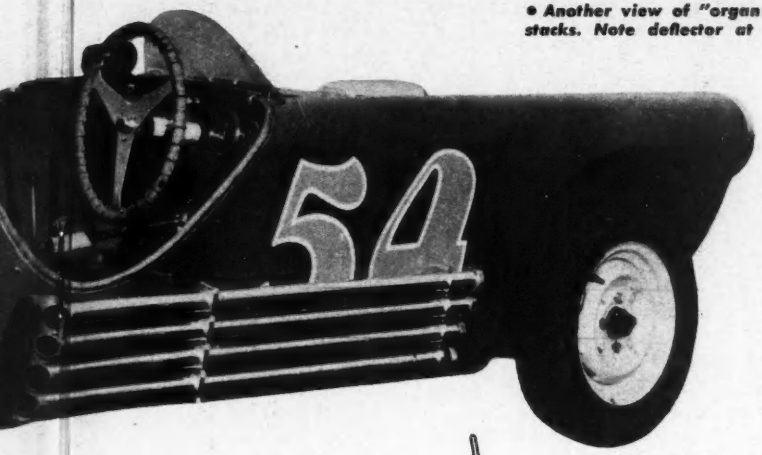


• ***Engine now boasts twin motorcycle type S.U. carburetors in place of single jug.***

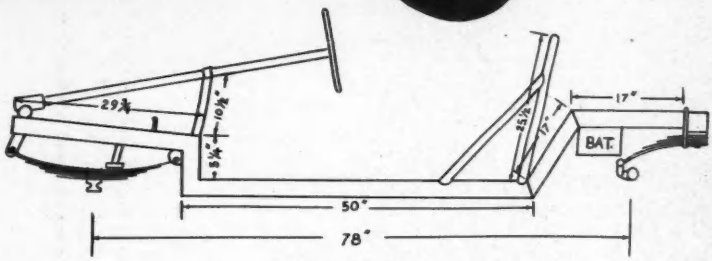


• *Rear end is stock Crosley unit suspended by leading quarter elliptic springs.*

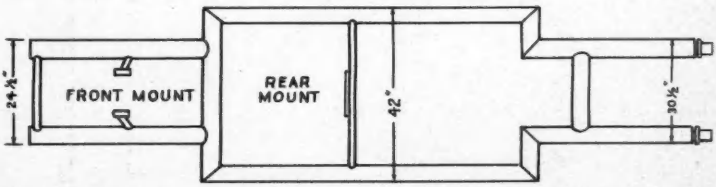
■ *The front end is almost entirely stock except for use of Columbia 50/50 tube shocks.*



• *Another view of "organ pipe" exhaust stacks. Note deflector at rear of pipes.*



2⅜" TUBE FOR FRAME



• *Plan view shows how Eyerly built extremely stiff, roadable tubular chassis for car.*

(*Continued from page 33*)

and reworked for strength and more accurate steering geometry. Steering was also reworked and placed on the right side of chassis for better balance on clockwise road courses. The rear springs were then designed and built up as special quarter-eliptics with the stock Crosley rear axle riding at the leading ends of the springs. The stock shocks were not dependable, but with considerable reworking they proved to be adequate. Wheels and disc brakes were stock.

The engine used is a stock bore and stroke, 48 cubic-inch or 750 cc cast iron block of late manufacture. The main modifications have been concerned with breathing characteristics and have been largely confined to head and valve gear. The single overhead cam was reground to Eyerly's own

(*Continued on next page*)

• *View of rear deck shows how body was formed without using compound curves.*

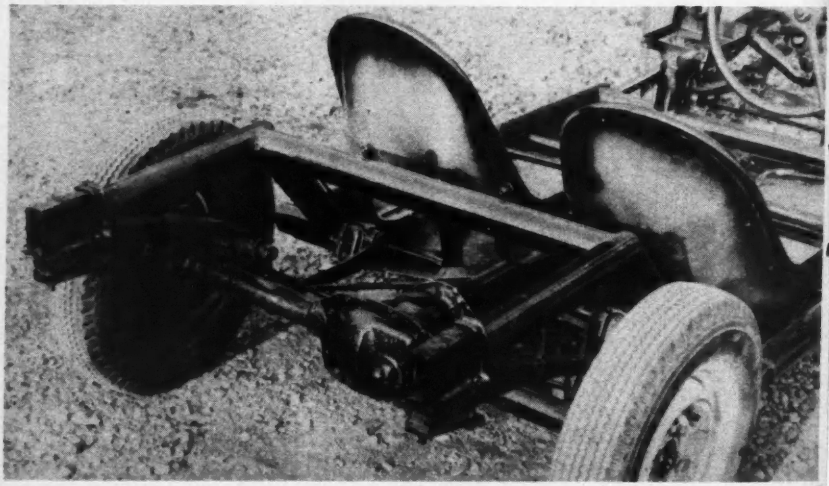
• *The builder fits neatly into the small but adequate cockpit of his fast special.*

POISON FOR PORSCHES continued

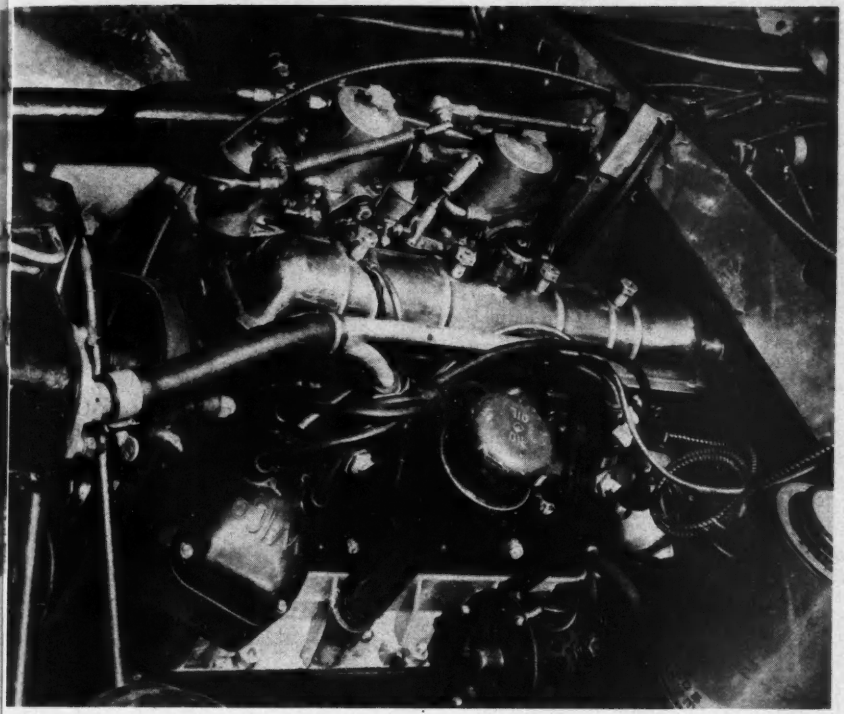
specifications about which he has so far kept very quiet. The ports have been cleaned out but not greatly enlarged with stock size valves. Compression ratio has been boosted to 9.5 to 1. Standard bore, aluminum pistons are used. Also aluminum is the special flywheel.

When Eyerly turned in his fantastic performance at Golden Gate he was running a single Ford Sixty carburetor with the throats routed to give the effect of two single-throat carburetors. Little or no attempt was made toward exhaust tuning, the headers running into one single pipe. Since that time he has changed the carburetion to a yoked pair of S.U. motorcycle side draft carburetors and has now started on a program of exhaust tuning. Toward this end the exhaust gasses are routed through four individual pipes running out the side and back to a deflector just forward of the right rear wheel. Another recent addition is an air scoop under the nose which leads back to the pan for oil cooling purposes. A Wico magneto sparks the mill. A major "must" in reworking a small engine is complete static and dynamic balancing of every moving part. This Eyerly did with the result that the engine can turn in excess of 9000 rpm consistently.

The cockpit of the car contains only those necessities for making sure the car does



• *Photo, taken by Eyerly during construction, clearly shows the rear suspension layout.*



• *Left side of super-hot Crosley engine shows Wico magneto. Engine turns 9000 rpm.*

what it's supposed to do. The steering wheel, in the best racing tradition, was cut from one piece of monel sheet stock. Mounted handily to the left of the wheel is a spark control lever, enabling the driver to control the ignition curve for any combination of circumstances. Also wide open to public view is the transmission case, the lever of which has been altered a-la Allard to place the shift knob just below and to the left of the steering wheel. Eyerly admits that the stock Crosley gearbox is the main weak link in an otherwise strong chain.

Total weight of the car is pegged at 750 pounds, just about the weight of a good hefty motorcycle. If, as Harry claims, the late modifications have materially increased performance in a car that could mop up much larger competition, much more will be heard from this rapid mouse.

• *Entire hood lifts forward giving access to everything from instruments forward.*

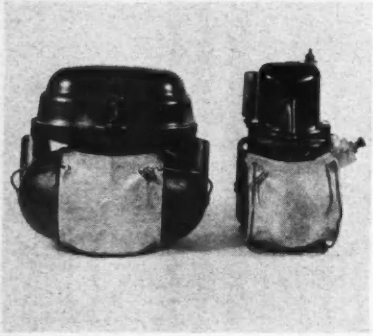
SHOW-HOW FEATURE:

BUILD YOUR OWN HOT IGNITION

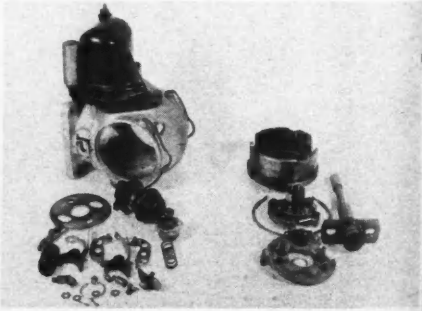
first part of a three-part series

MANY different types of ignitions have been subjected to the test of tests by being adapted or converted to the engines of hot rods. Of all these, the Lincoln Zephyr 12-cylinder distributor converted for use on a V8 has proven itself to be one of the most outstanding and trouble-free conversions found in all-around competition today.

As different as the various types of distributors themselves are the conversions applied to the Zephyr distributor. Taking the "finer" points from these various types, we come up with a durable and compact racing type ignition. All operations are well within the average craftsman's ability. The special parts necessary in the following conversion are also found in the local merchants' parts houses. All stock components like the distributors themselves may be found in local Lincoln and Mercury or Ford Agencies. Starting with the tune-up men and mechanics at these agencies and finishing at the local junkyard, more than enough parts can be accumulated to suffice.

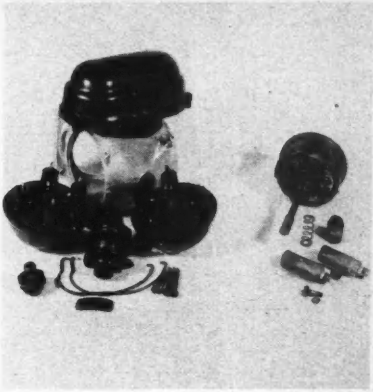


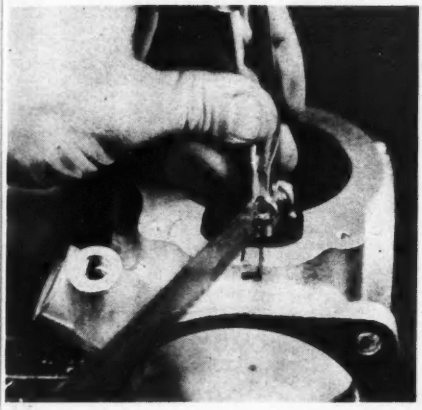
Shown here are the two stock distributors necessary for the conversion. The Lincoln distributor should, if possible, be procured complete with the coil, inner terminal plates, outer caps and a flawless distributor case. The Ford distributor may be either an 11-A (1937 to 1941 Ford) or a 40-B (1932 to 1936 Ford). Only the inner components will be used from either of these. The outer condition may be disregarded. Price on this item is from one to two dollars.



Being the same with either the 40-B or the 11-A, the saved parts are on the right with the discards on the left. Saved parts being the base, distributor cam and weight assembly with retaining ring, distributor shaft, points-plate and points-plate retaining ring or wire. If vacuum braking is to be desired, this plate may also be saved, along with its retaining ring.

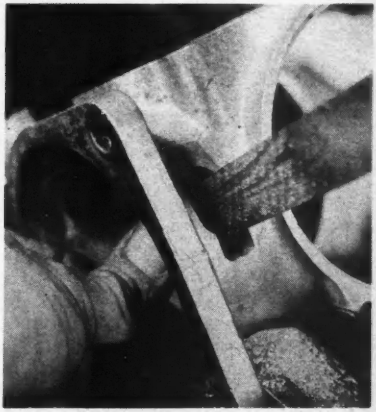
Here is the breakdown of the Lincoln Zephyr distributor, the saved parts on the left and discarded on the right. Saved parts are the case, coil, if checked and found good, inner terminal plates with outer caps, rotor, vacuum adjusting nut, cap bails, coil retaining screws and calibrated advance and retard cover plate.





Quarter-inch wide by quarter-inch deep notch is hacksawed into case where back part of coil mounts. Slot is for new wires from condensers to points.

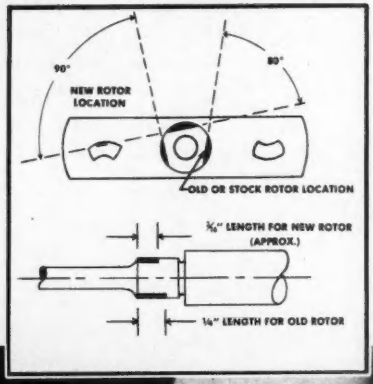
Opening for points-plate set-screw is widened to within 1/16" of edge of cover-boss. Exact amount can be determined by inserting Ford base with points-plate and retaining clip ring in place.

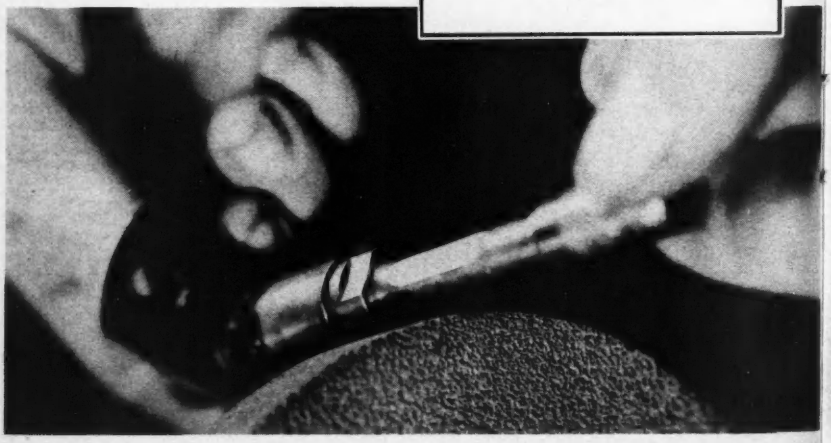


CONTINUED

Ford base where ear of points-plate fits is lengthened by removing 1/8" with hack-saw, to allow a greater advance and retard range.

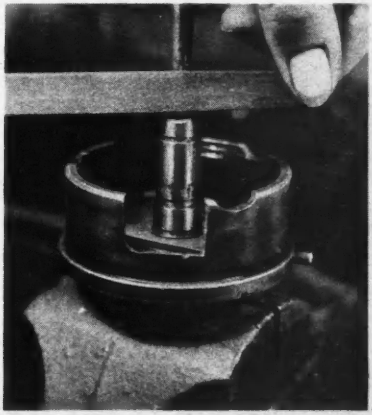
New rotor location is rough-ground on Ford distributor shaft. Note diagram #1 for exact location. Plus or minus 5 degrees is tolerable. The operation may be done completely with the use of a file.





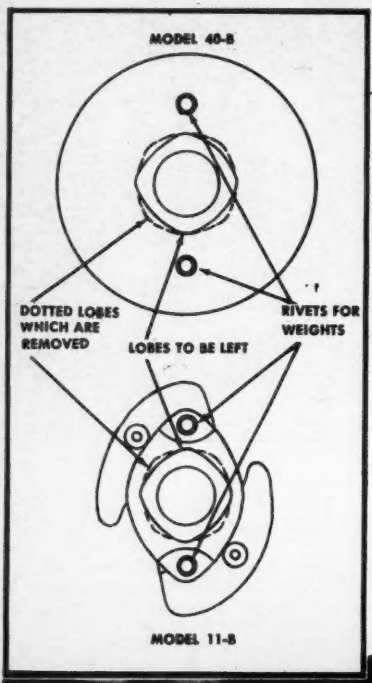
With the inserting of the Lincoln Zephyr rotor on the new rotor location, on the Ford distributor shaft and then inserting the shaft into the Ford base, insert the assembled unit into the Lincoln case.

By checking to see if base is flush with case, where case mounts to timing gear cover, amount to be removed from distributor shaft where rotor mounts can be determined.



With amount to be removed determined, remove same by filing on new rotor location. Double check by assembling and disassembling a few times allowing for a minimum amount of end clearance for rotor, between .005 to .010 of an inch.

CONTINUED

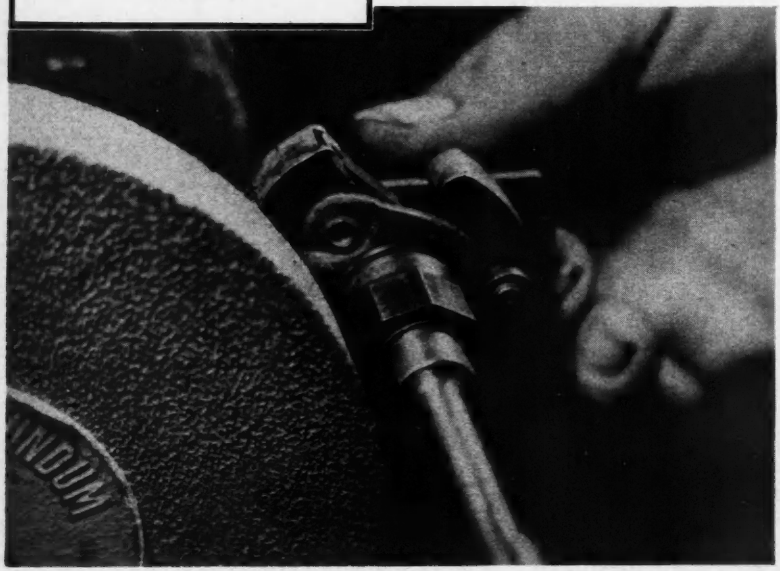


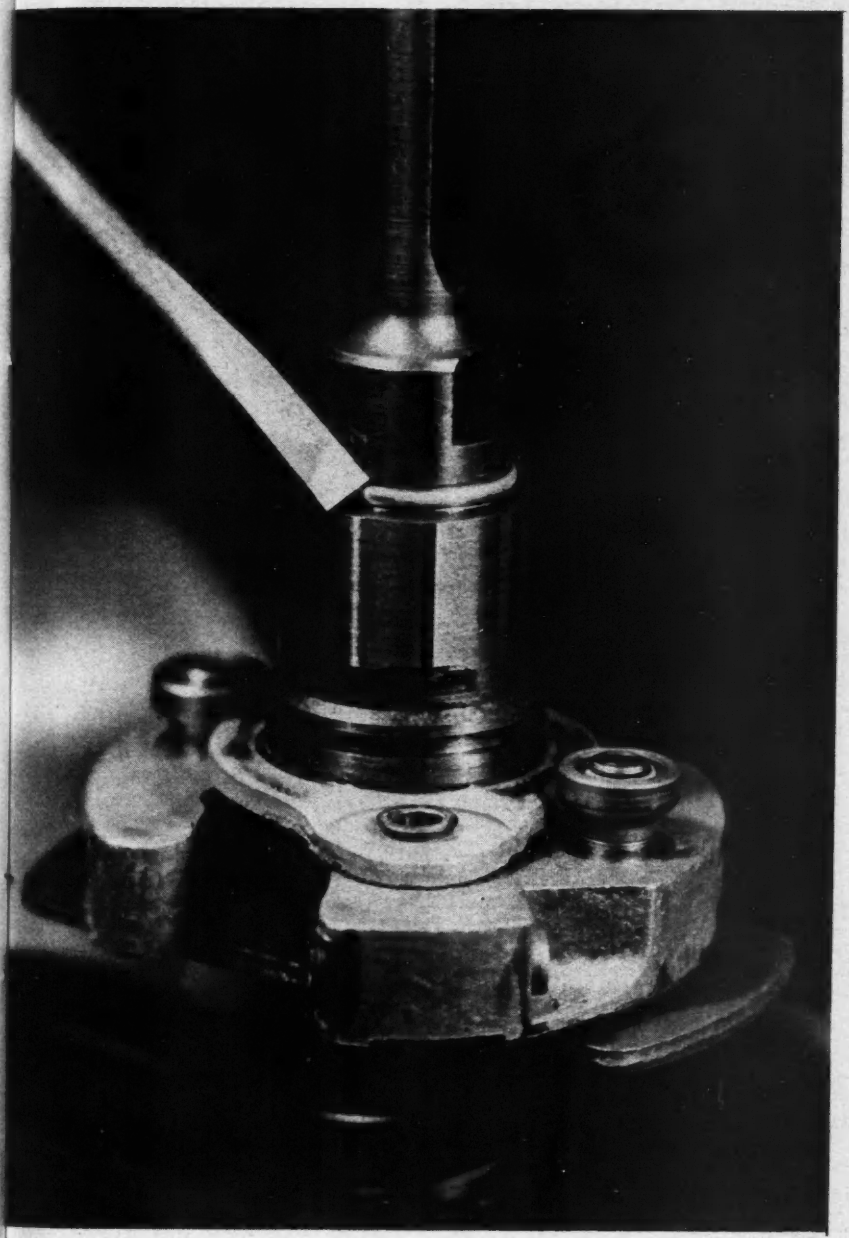
LEFT & BELOW

Since the idea of this conversion is the use of one of the coils within the Lincoln coil-housing for each bank of four cylinders instead of six, the eight-lobe Ford distributor cam must be reground to a four-lobe cam as shown in the accompanying diagram. When grinding, be sure that the lobes removed are those shown in the drawings. Also make sure that you don't cut into the lobes that are to be left. Total amount to be removed is 1/32 of an inch. Finishing touches are made with emory cloth backed up with a file.

RIGHT

New 4 lobe cam and weights may be installed in either of 2 ways with 180 degrees difference. This makes no difference. Install original Ford cam and weights retaining ring. If a vacuum braking plate is desirable it may be installed unaltered at this time. The finished product will perform very nicely without this plate however.

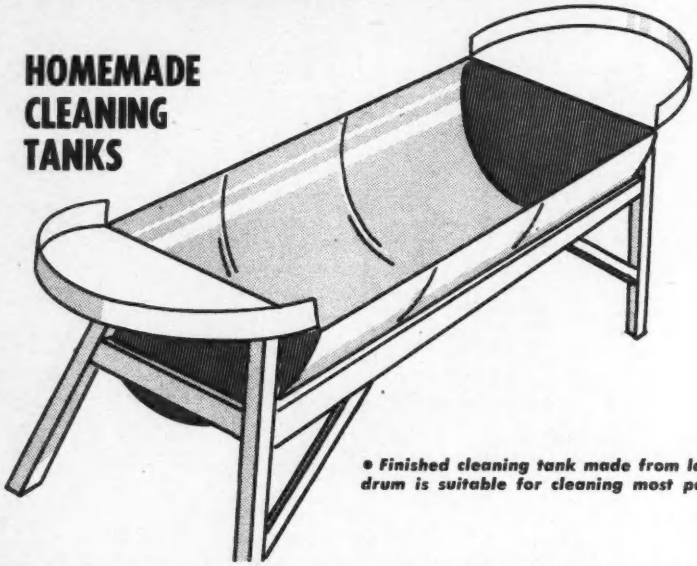




Garage Gimmicks

by John Christy

HOMEMADE CLEANING TANKS



• *Finished cleaning tank made from large drum is suitable for cleaning most parts.*

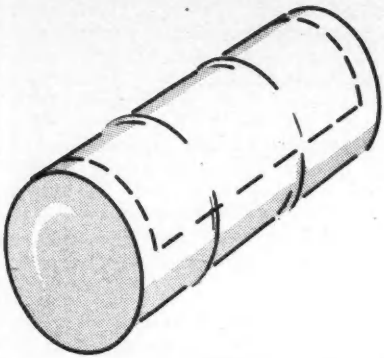
NO matter how deep you delve into the innards of your car, you'll always run into the problem of what to do with greasy or dirty parts. One of the most frustrating things about mechanical work is having to dig through a layer of greasy scum before getting at the part on which you wish to work.

The obvious solution is to use some sort of container in which you can dunk the part in solvent. Tanks for this purpose are commercially available but in most cases these are somewhat expensive for the amateur or the small operator. In many cases they are elaborate affairs that actually force solvent under pressure through and around the parts to be cleaned. For the small shop, such devices are a needless expense.

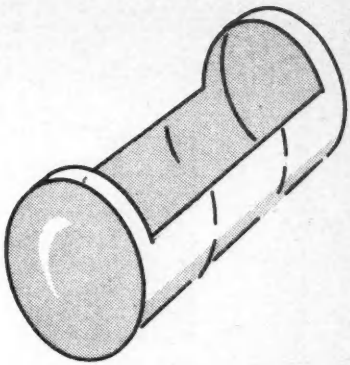
Here are two solvent tanks which combine utility with convenience at little or no expense. Both are made from used oil and grease drums which can be found in any service station. The only tools necessary are a pair of sheet metal shears, a chisel and, if a metal stand is to be made, a torch. A hack saw can be used in place of the shears.

The first of the two tanks is made from a 30-gallon oil drum and is best used for larger chassis and running gear parts such as gears, front end gear and the like. Cut around each end as near the rim as possible as shown in the drawing. This cut should

Illustrated by George Wallace



• To start, cut 30 gallon oil drum along lines as indicated with torch or chisel.

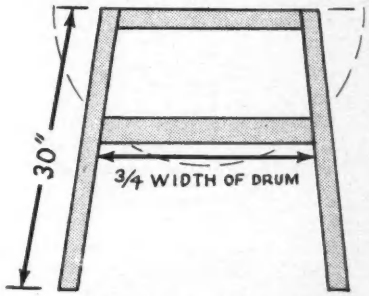


• Remove the cut segment, which should be exactly ½ the circumference of drum.

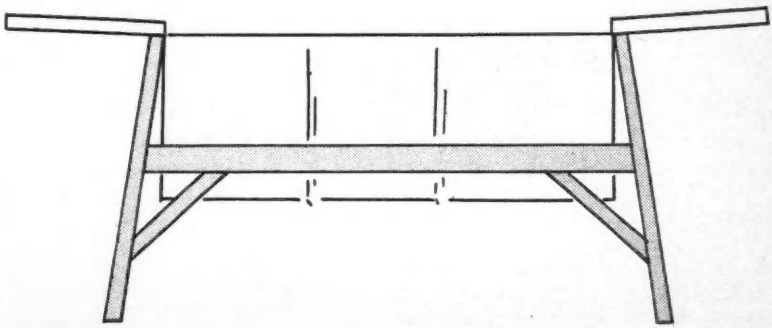
be made *exactly* half the circumference of the drum, no more, no less. Using a straightedge for a brake, bend the freed sections of each end straight out to form horizontal trays. This forms an open trough with drain platforms at either end and will hold all but the largest and heaviest parts. A sawhorse placed at either end will hold the tank but a better plan is the use of the simple rack illustrated.

This rack is made from pipe, tubing or angle iron. There is no critical measurement except for the width of the end pieces and the length of the side stringers. The *lower* end pieces should be no more than ¾ the

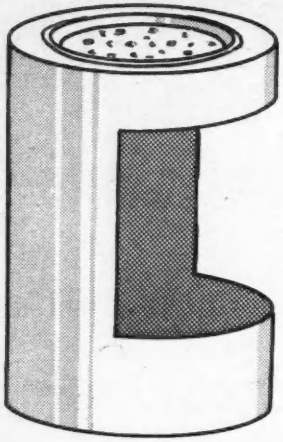
(*Continued on next page*)



• For best results, a stand should be made to hold drum at best work height.



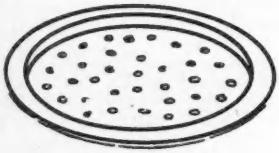
• Side pieces of stand should be slightly longer than drum. Ends should fit snugly.



• *Small tank is made from a five-gallon grease can found in most gas stations.*

width of the drum. The side stringers should be slightly longer than the length of the tank, allowing the legs to sit at a slight inward tilt with the *upper* cross piece fitting snugly into the angle formed by the end of the drum and the horizontal drain tray.

The smaller tank is made from a five-gallon grease can and is suitable for cleaning and draining small engine and chassis parts. Cut into the side of the can as shown in the diagram, removing a section no more than half the circumference of the container with the lower horizontal cut approximately seven inches above the bottom and the upper cut about two inches from the top. The lid of the container is then punched or drilled profusely. The result, when the lower part of the can is filled with solvent, is a container in which you can clean parts and, by laying them on the drilled top, drain off the excess solvent without waste. Simple, huh?

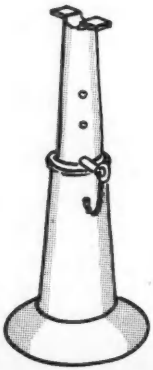


• *Removable lid of can should be punched or drilled to form the top drain platform.*

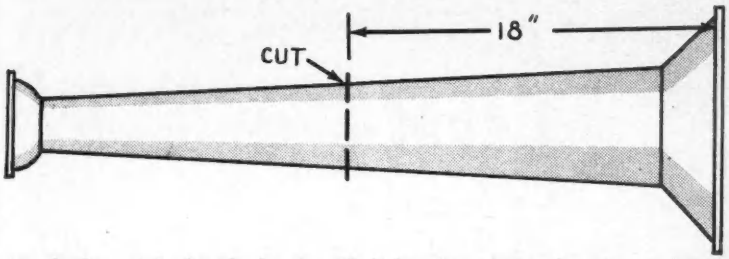
Garage Gimmicks

ADJUSTABLE CHASSIS STAND

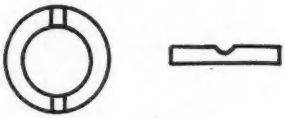
THE use of Ford axle housings for stationary jacks or blocks is not by any means new. These homemade stands are used in hundreds of garages across the country. However, almost all of these lack one feature found in commercial stands—adjustability.



• *Finished chassis stand made from Ford axle housing is adjustable for height.*



• *To begin, cut Ford axle housing 18 inches from base of center section flange.*



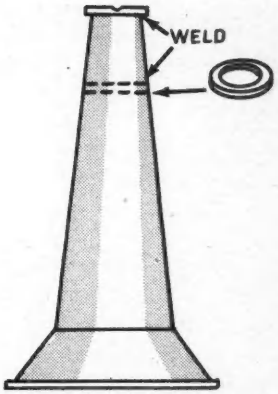
• *Make two 3½ inch circular flanges of ¼ or ⅜ inch sheet stock as shown here.*

Here is an improved version of that old standby which incorporates this feature in a simple and inexpensive way. This method can be used to convert a stand that is already made and in use or it can be used to build an entirely new stand.

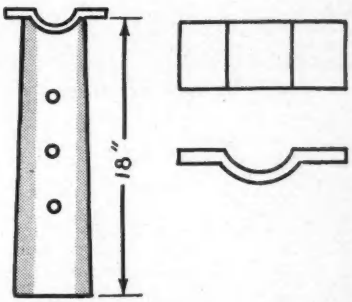
For a new stand, cut a Ford axle housing 18 inches from the base line of the center section flange being sure the cut is perpendicular to the center line of the housing as shown in the drawing.

Make two circular flanges 3½ inches wide from quarter-inch or ⅜ inch flat stock. Drill and ream or flame cut 2½-inch holes in the centers of these flanges. Jam and weld one of these as shown in the diagram inside the neck of the axle housing, then center and weld the other to the top end.

Cut a length of 2½-inch O.D. pipe or tubing to 18 inches, cutting on a radius as shown in the sketch. With a ⅜ or larger bit, drill holes at intervals along the length of the pipe. Next, weld a radiused flange on the end as illustrated. This pipe can then be slipped through the flanges in the housing and a pin can be slipped through the holes in the pipe to hold it at any desired height. You now have a stationary jack with all of the adjustability and stability of the commercial item at a fraction of the cost.



• *Weld one flange inside stand at dotted line, then weld the second at the top.*

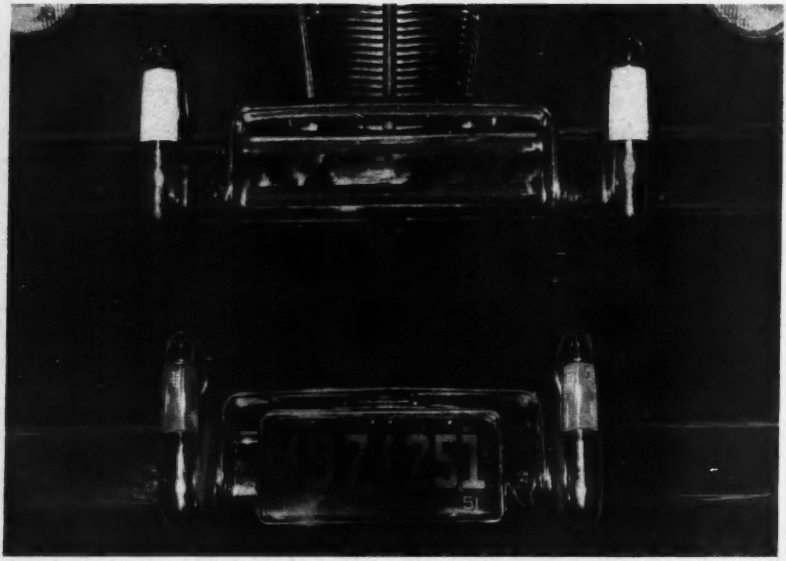


• *Form ⅜ inch plate to shape shown at right, then cut and drill 2½ inch pipe as shown at left. Weld the plate to the end of the pipe and slip pipe into the stand.*

TORCH TIPS

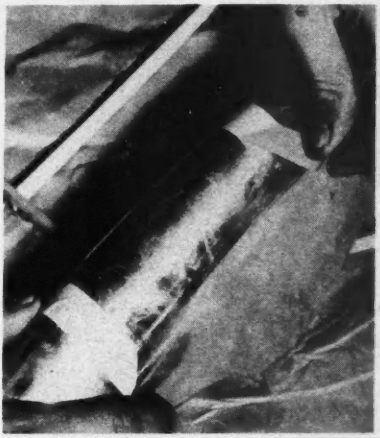
by Dick Day
Photos by George Barris

bumper guard taillights



AT one time or another every custom enthusiast has stood to the rear of his little jewel or custom-to-be, and mulled over the thought of just what restyling, if any, should be done to the taillights. In most cases, redesigning the stock components or replacing them with other manufacturers' products gets the job done. But, for a few various makes, removal of taillights achieves a much more cleaner appearance and in some instances more length appeal. This, however, presents the problem of installing the taillights elsewhere, the alternative usually being the lower rear body panels. To some, this idea has become too common a practice, so, like all backyard designers striving for originality, somebody came up with the unique idea of incorporating the taillights in the rear bumper guards. This innovation gave the custom field a new, wonderful gimmick for taillight restyling, and a clever way to install turning or directional lights and backup signals.

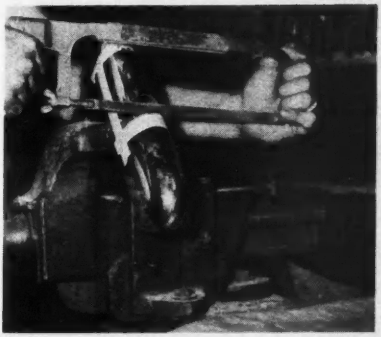
For some time this bit of restyling has remained a secret among the enthusiasts unless they were fortunate enough to catch some local body shop in the process of the job, but with assistance from the Barris Brothers Kustom Shop in Lynwood, California, we present this step by step feature on the following pages.



(NOTE: A check into your state's vehicle code for the required taillight height is advisable for radically lowered cars.)

1. Remove bumper guards from car and measure off exact lens size on each guard. Suggested size: 4″ in length and 1″ wide.
2. After determining size, mark off area with masking tape to guide hacksaw cutting.
3. Saw to bottom edge, then cut 1″ V-section allowing clearance for reversing hacksaw.
4. Position the hacksaw blade sideways and then saw straight on the horizontal line.
5. After section has been removed, use a fine-tooth file to clean edges and corners.

(*Continued on next page*)

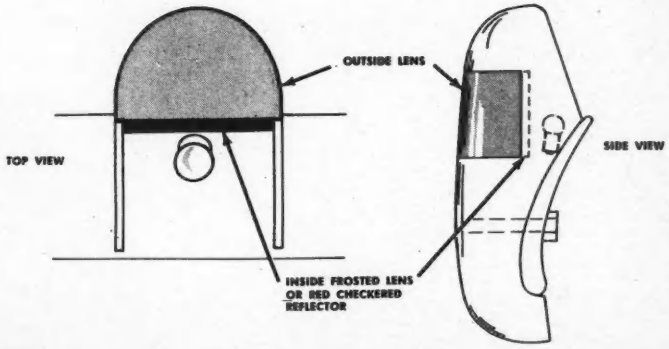


6. Use clear 1″ plexiglass for lens which can be purchased at almost any surplus or hobby shop store. When cutting use coarse tooth hacksaw and cut slightly oversize. This will allow you to fit the lens to the opening by filing, eliminating the possibility of the lens being cut undersize from the beginning.

7. After the lens has been correctly fitted to the length and width of the opening, its outside surface may be ground oval by using a grinder set up with a 36 closed coat disc.

8. The outside oval contour of the lens should match that of the bumper guard.

9. For the front bumper guards, which will be the turning lights, cut a ¼" piece of frosted plexiglass to fit inside the bumper guard and flush against the inside face of the contoured clear plexiglass lens. The ¼" frosted plexiglass is to be bonded or laminated to the outside lens with clear plastic bonding cement, thus forming a socket fit for the lens unit (see diagram). For the two rear taillights, plastic red-checkered reflection material of comparable thickness is used in the same way by laminating it to the clear plexiglass lens at the rear.



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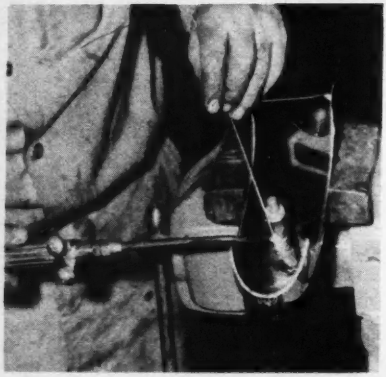
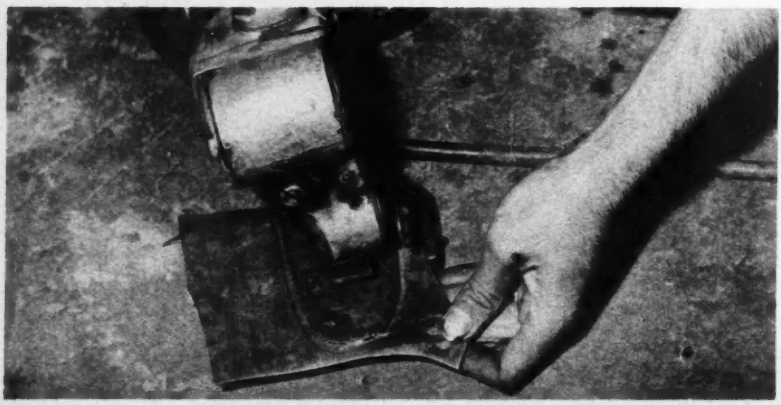


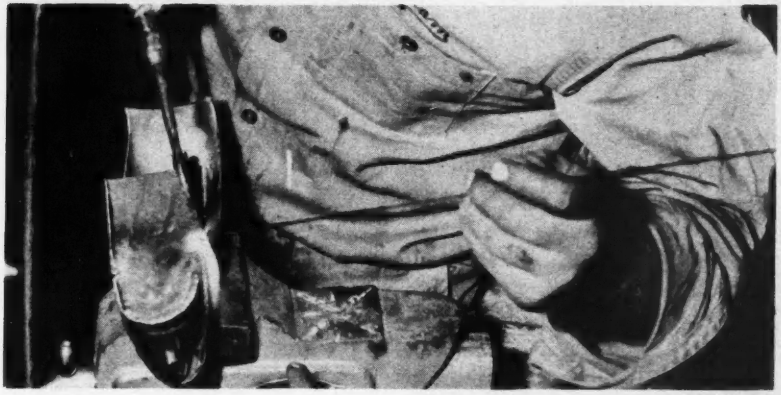
10. To smooth the outside plexiglass lens surface, first sand with wet 320 grit sand paper and then 400 and 600 grit sand paper.

11. Finish off outside lens surface by buffing on cloth wheel using plastic polishing compound to bring up high, clear lustre.

12. If your bumper guard bolt doesn't attach from the inside, it would be advisable to make it so, giving the guard a clean outside appearance eliminating bolt heads, etc.

13. Cut metal backing plate for upper section of guard from 18 gauge sheet metal.

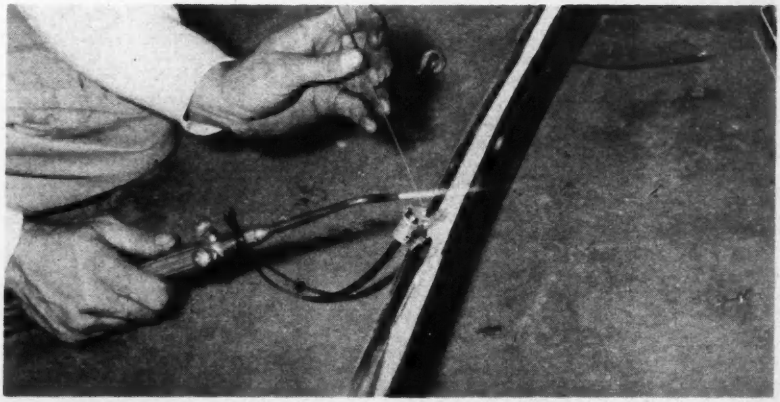




14. Weld backing plate to outside edges of bumper guard. When finished, grind weld area smooth and hand file for neat appearance.

15. After bumper guard has been rechromed install lens in the opening and completely seal with clear weather stripping cement.

16. Braze two-way light socket on to the bumper where guard is positioned, making sure light bulb has adequate clearance.



"GRAB BAG"

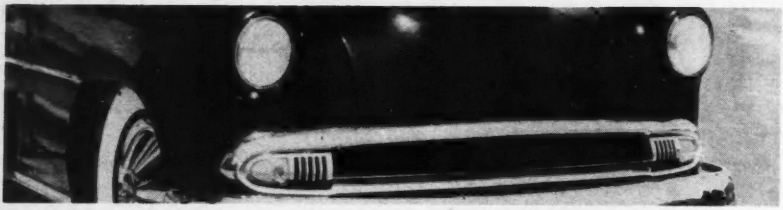
WE didn't bother to look up Webster's definition of the term "Grab Bag," knowing the old gent probably didn't have one. We figured our own definition would suffice, said definition having to do with a hatful of ideas that readers can grab or leave alone as the mood strikes.

Main reason for addition of this department is the amount of mail that crosses our desks asking for ideas on a large variety of different makes and models of domestic iron. Consequently, each month we'll run a couple of pages crammed with ideas on one particular item, part or attachment of several makes of cars.

Leading off, this month, are six variations on a single theme—the straight-bar grille. None are alike but all have one thing in common—simplicity, replacing the dollar grin with the uncluttered look.

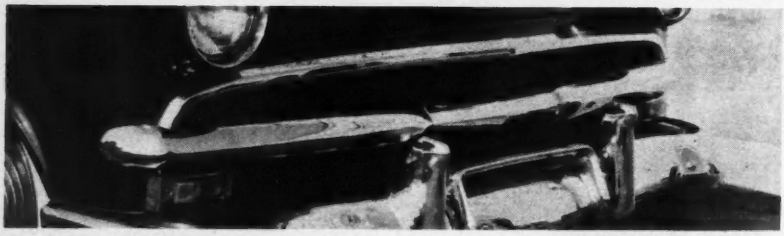
JOE SIEGFRIED, OWNER — **BODY WORK BY PETE**

• '53 Oldsmobile bumper center bar lends this '53 Ford grille impact and simplicity. Restyling feature was accomplished by removing stock grille and replacing it with Olds component, obtaining a floating type grille with a minimum amount of work and cost.



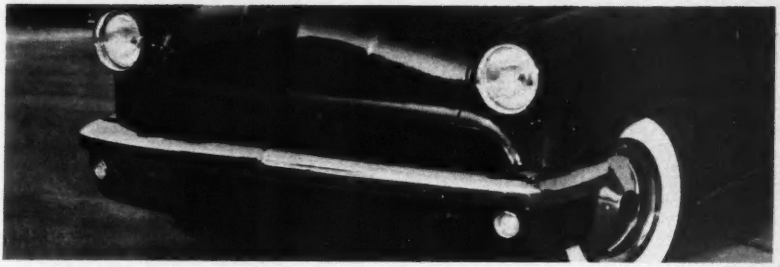
THOM CHARTER, OWNER — **BODY WORK BY MASTER'S**

• By extending the hood and fender paneling down over the upper section of the stock grille, this '52 Chevrolet takes on a completely different appearance. The top grille components were removed and 18 gauge cold roll sheet metal was used for filling-in.



DICK MEYERS, OWNER — **BODY WORK BY CERNY'S**

• By removing only the center piece from this '53 Ford's stock grille and welding in its place the center section from a one piece Ford accessory grille bar, the overall frontal appearance changes considerably for length-appeal and simplicity.

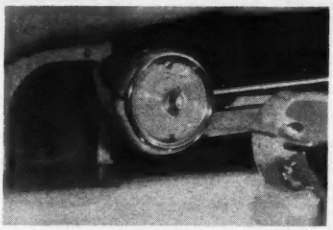


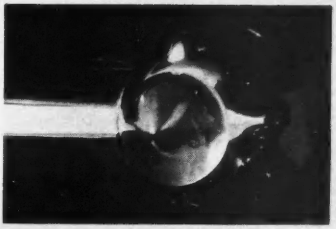
PHIL SCHMIDT, OWNER — **BODY WORK BY STYLER**

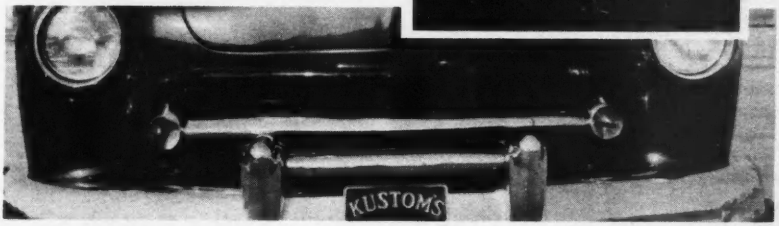
• A clever bit of trim removal is accountable for the simple, yet effective grille styling on this '52 Mercury. All lower bumper trim has been removed including small chromed ribbon contouring top of grille. Lower and upper areas were then painted.

MARVIN BUSHONG, OWNER — **BODY WORK BY RECTOR'S**

• Narrow grille opening and simple one bar floating grille achieves width and low frontal area. Grille bar is accessory for Fords with Henry J parking lights adapted to each end (see inset photo) which have been converted to directional turning lights.







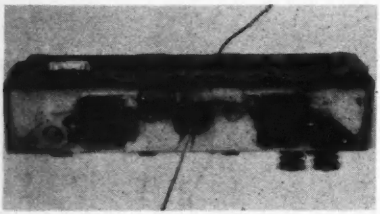
DALE MARSHALL, OWNER — **BODY WORK BY BARRIS**

• This floating grille was constructed from stock '51 Ford components. The main bar was made from Ford center bars welded together. The turning lights at each end are inner spinners from the center-piece with clear lucite ground lenses. (See inset photo.)

INTERCHANGEABILITY PLUS!

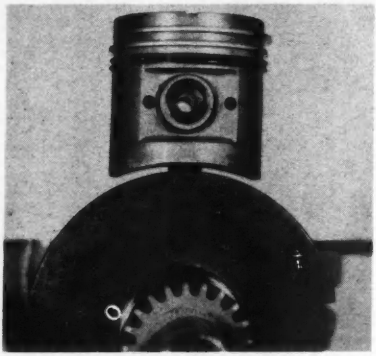
(*Continued from page 14*)

identical with the 52-53 OHV-6. Again larger, the EBY or Merc utilizes 1.78 inch gulpers, identical with the 54 OHV-6 intakes. This extra .130 inch diameter is a desirable dividend, as all who have struggled and ground for more breathing on the "L" heads will agree. In case you fell off around the last curve, speed secret #1 for the EBU Ford will consist of EBP-6507-E intake valves. Merc lovers will ask for '52 F-8 intake valves and get an increase of nearly .040 inch more to 1.81 inches. Somewhere here, we expect to hear a raucous voice inquire, "How about '53 Lincoln intakes, aren't they big?" Yes, friend, they are, and if size is all you want, chop a seat in the head for a 2 inch popper! Seriously, though, the '52 F-8 or Lincoln intakes are plenty large (1.81 inches) and about 16% lighter than



• Heat riser is connected to one port only in each head. Wire shows routing.

the 2 inch, late Lincoln valves. Another factor against the use of the largest valve is the restricted area around roughly ½ its diameter at the edge of the combustion chamber. Extremes in any respect are not predictable and this one definitely contributes little. 1⅞ inch GM intakes currently used in some of the Chevvie "warm-ups" were measured and found to be slightly heavier than the big Lincoln valves, though having nearly same stem diameter, .342 inch, but longer. Reducing the GM valve stem length without rehardening is a bad proposition, as the Rockwell hardness decreases near the normal lock groove to avoid brittleness. Any speed merchant who has tried to machine the heads of any of these cast Ford valves will tell you how hard they are. Accordingly, may we suggest that you accomplish the desired weight reduction by *grinding* a shallow radiused cup in the head, about .070 inch deeper than the present .030 inch cast depression. This can be most simply done with a 4 inch wheel which has a 2 inch convex radius dressed on its periphery. The intake valve head is then cup ground on the center line of the grinding wheel until the *edges* of the cast depression *just disappear*. Grind only this deep, to leave a uniform 3/16 inch thickness at the outer edge of the valve.



• Ford V8 piston is identified by heavy-walled wristpin, is of solid skirt type.

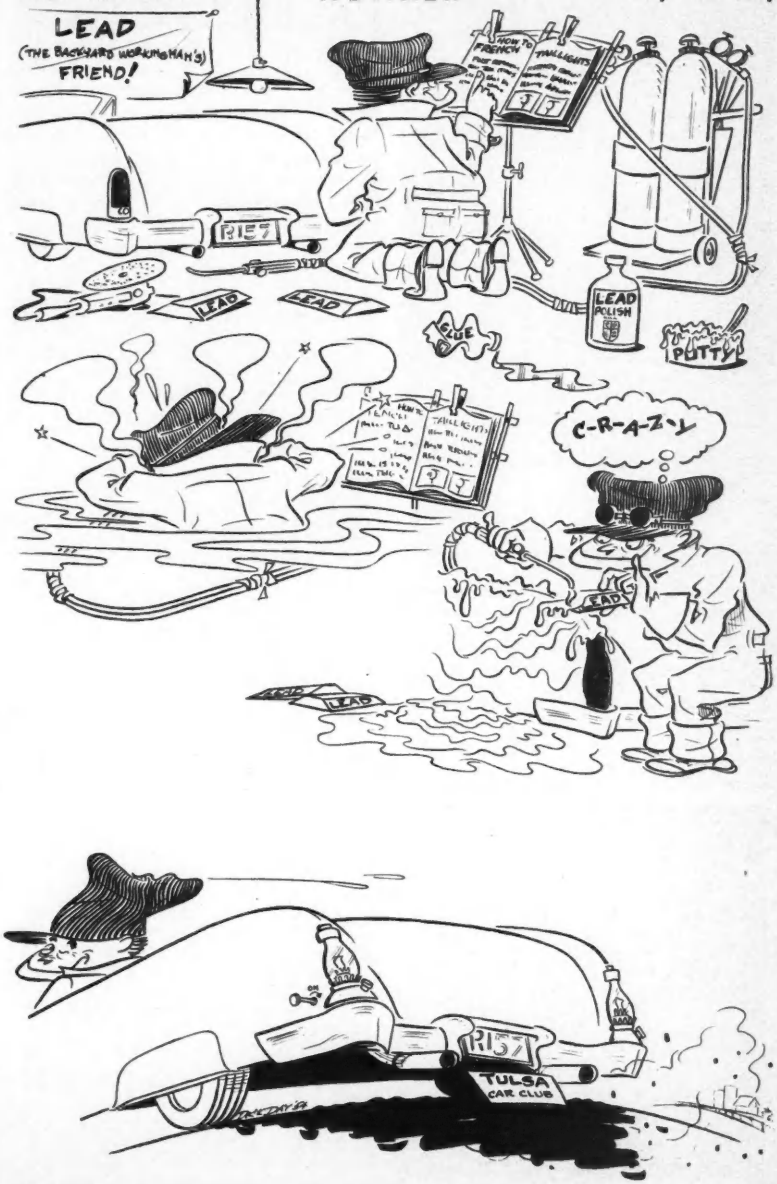
We do not recommend substitution of an exhaust valve larger than the 1.5 inch stock size. Careful cleaning of the throat area beneath the valve with a 75 degree seat grinder or 70 degree reamer should suffice. Many soup jobs are complicated by greatly increasing exhaust heat at this point through an ill-advised size increase. Getting maximum use of the available port area is more desirable. Of considerable merit, at this point, would be the use of a port throat of a venturi shape. The seat is then merely .070 inch ground flat on a continuously curving surface. Admittedly, this would be difficult to attain and would require careful wheel dressing and final seating. Care should be used when smoothing the combustion chambers, to remove the sharp edges which are a natural result of reseating operations. Easiest method of removal is to dress a ⅛ or ¼ inch radius on a 2 inch stone and cut just deep enough to remove the "recess edge."

(*Continued on page 60*)

"The Classic Look"

HONKER

by Dick Day



LOWERING the rear end of a car with leaf springs is a fairly simple matter; lowering blocks placed between spring and axle accomplish the job with no strain. But what to do if you're a Buick owner or the possessor of one of the Oldsmobiles with coil springs in the rear? Sure, you can lop off a coil or two but then you take a chance on bottoming or bending a drive shaft.

There's a much better way to accomplish this rear end drop with none of the attendant dangers of chopping. Here, in pictures is the story of how it was done.

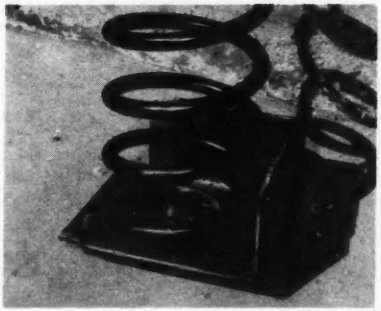
1. The first move that must be made is the cutting of a tunnel for the drive shaft which, after the lowering, will ride higher in the chassis. The tunnel need only be cut into the rear portion of the interior between back seat and front seat platform as shown here. The tunnel should be the same height as the total amount of drop desired.

2. Next step is to raise the car and remove the rear springs. Next, cut access holes on each side, over the spring mounts in the rear crossmember. Then remove the spring mounts themselves, cutting out just enough to allow the spring to pass freely through the former mount. Removal of more material will only complicate the project further.

3. Next, out of ¼ or ⅜ inch sheet, make a box six by eight inches with sides three inches deep. This should be left open on two sides as shown in the photograph. Place the box over the former spring mount then align, mark and drill a hole for the spring mounting bolt. Directly over and in line with this hole, arc-weld a nut to fit the mounting bolt as shown here.

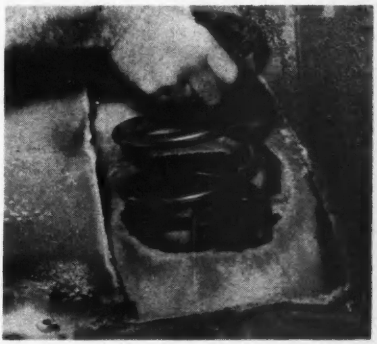
DON'T SPOIL THAT COIL

. . . there's a better way



Photos by Zelenka

4. The result of the above operations is shown here. The upper end of the spring is placed over the hole in the box and the original mounting washer, together with a second heavy washer, is placed over the spring. Through this goes the mounting bolt, which, when cinched down, holds the whole unit together.



5. Disassemble the spring and mounting box and align the spring over the rear axle, checking to see that it moves freely through the cutaway area in the cross-member. This step is important because any last trimming must be done at this point due to the fact that the final assembly of the spring mount will make the hole completely inaccessible.

6. In the final step, reassemble the spring and box which will form the new spring mount. With the car raised to take all tension off the spring, weld the box solidly to the frame over the spring as shown here. It will be readily seen that the effective mounting of the spring has been raised by three inches, the height of the box, allowing a three-inch drop in the car.

Lowering done at Lynn's Custom Shop, Glendale, California

INTERCHANGEABILITY PLUS!

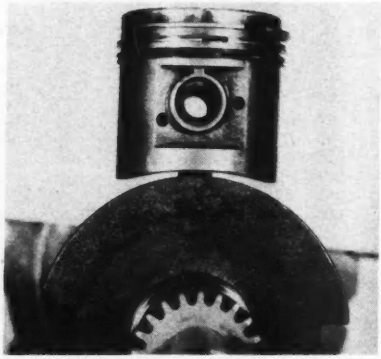
(*Continued from page 56*)

The use of a radiused 2 inch wheel will usually improve wall clearance behind the enlarged valves, which begins to be a limiting factor on further size increases.

Now that we have made up our minds about valves, let's decide how to make them keep their seats. We mean springs, because the best valve job performs only if spring tension is sufficient to keep the valves seated over the full range of rpm. Any additional pressure is a drawback because of increased friction and decreased life of the valve train. Spring tension specs on these two engines call for 54-62 pounds at a test length of $1\frac{13}{16}$ inches. If the installed length of the spring is not longer than spec, either engine should turn nearly 5000-5300 rpm without valve float. Too often, however, springs are tested but no measure is taken of their length *as installed*. Importance of this step must be appreciated by anyone not familiar with OHV engines before their success on the power path will be assured. This considerable change in thinking must take place before the old flat head artist can make these rocker jobs "perk." With increased intake valve weight, more tension must be produced or float will occur at speeds below those which are normally required "in the gears." As an example, we have driven a '54 Merc which was particularly sad on acceleration. Further checking revealed float at 4300 rpm, which erected a very low ceiling on the car's expected performance. Together with suspected seat eccentricity or improper seat width, below spec tension will certainly be one of the important check items. Many '53 sixes, which have heavier valve trains, have indicated 4800-5000 rpm with stock springs and 5500-5700 with $\frac{1}{16}$ inch spacers under the springs. We do not advocate indiscriminate addition of spring spacers. Tension must be measured and if more is necessary, Ford part #B3Q6515A spring washer allows increases by .030 inch increments. We recommend selective tensioning by use of the lighter EAA6513A on exhaust valves and EAM 6513 on intake valves, shimmed as found necessary. As the 1.5 inch diameter *exhaust* valves are used throughout the family, the EAA spring should be adequate, if shimmed slightly. Remember, the closely-spaced coils of all springs should be installed *against* the head.

CAMSHAFTS

Close scrutiny of our modification table will disclose that we did not recommend substitution of the Mercury camshaft into the EBU Ford block. This was done for excellent reasons as the Mercury cam has journals $\frac{1}{8}$ inch *smaller* than the Ford. Grinding the Ford cam journals down to Mercury size, 1.925 inches, could be done but we do not recommend it. Because these camshafts are



• Ford Six and Merc piston have thin-wall pin. Piston diameter is .125 over Ford 8.

shell mouldings the depth of hardness is not the same proposition as it is on a forged shaft. Any modification on either lift or duration should be as slight as possible, maintaining the same lobe curvature and clearance ramps as the stock lobes, any grinding within 75 degrees of the toe of the shaft is inviting trouble. Cam followers are identical with the six and are of chilled-cast material, an absolute necessity with the moulded camshaft. Diameter of the cam follower at the mushroom is $\frac{31}{32}$ inch, allowing cam designs which would not be successful with many of the barrel-type lifters. Billet shafts will soon be available for both these engines and we strongly recommend the retention of these chilled-cast followers to prolong cam life.

We have pictured a Willys six "F" head tubular pushrod cut to the same length as

the Ford. Imagine our amazement when we weighed them and found the solid Ford pushrod lighter by about one ounce! Justification for the use of any tubular pushrod is, of course, to obtain added stiffness. If you feel this is required, by all means use 'em, but take a long look at your spring tensions if you are bending the stock item.

CARBURETION AND IGNITION

Three variations of stock parts furnish interesting options for various stages of tuning. This year's EBU carb has slightly larger venturi than the '53 EAB, plus a spark control valve not present on the EAB. As the OHV engines require about 14 degrees *more* advance than their predecessors, the spark control valve and different distributor advance characteristics are basic necessities. About 80% of the tuning difficulties with late Fords lies in the lack of understanding of how this vacuum-advance system works. This ignorance will continue in 1954 and already accounts for much of the performance defects of the Mercury. As the Mercury utilizes the four throat Holley in which secondary carburetion is controlled by the same factor as ignition advance, we can see how dependent the two systems have become. Maximum advance of 35 degrees, crank shaft, is obtained on the Merc distributor with only 1.52 inches of mercury or about ¼ pound vacuum. Many distributor stroboscopes are incapable of the required sensitivity at this low pressure, to say nothing of the average "strob" operator! This is not in criticism of the design but merely to point out requirements and pitfalls. An interesting combination might prove to be the EBZ-9510 truck carb and manifold calibrated with the FAD 12127-B distributor. This provides considerably more venturi area than the EBU carb and more manifold passage volume also. However, acceleration with the larger displacement engines would not equal the complete Merc set up. Don't underestimate the Merc 4 throat, as its total flow capacity is roughly the same as two of the EBU '54 Ford carbs, with a little to boot! However, the biggest performance fac-

(*Continued on page 66*)

LIL' BEEP

By Dick Day

"But pop . . . airscoops are th' MOST!"


The Lincolnized-Merc that
PAN-PACIFIC

...at stole the Dealers' show and became a ...

TRADITION BREAKER

Photos by Eric Rickman

WHEN a major automobile company unveils its new models to dealers in a large city they generally do the job up in a manner to put a coronation in the shadow. Ford's recent unveiling ceremonies of Lincoln and Mercury in Los Angeles were no exception to this rule. Another, almost unfailing, rule is that nothing, but nothing, must be allowed to detract from the business at hand—the next year's stock-in-trade.

In this one respect the powers that be in the higher echelons of Ford's empire smashed the rule to very small fragments. The hit of the show was neither the new Lincoln, nor the '54 Merc. It wasn't even the new Merc overhead engine. The smasheroo was none other than a California custom!

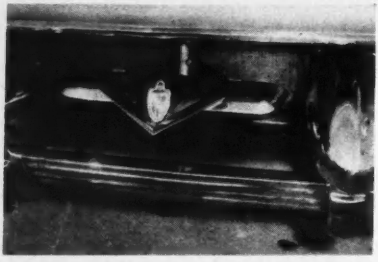
Here's how the whole thing started. Along about last spring, Harry Cruse had purchased himself a nice new Mercury hard-top convert. Harry, who had owned several custom cars before, vowed that his latest acquisition would remain stock. It's quite obvious now that the vow was broken.

Seems that Harry had a couple of bosom buddies name of Johnny Cammerano and Eddie Sanchez respectively. Johnny just happened to own a body shop where the three sometimes gathered to pass the time of day. Harry, made strong by his vow of abstinence, dropped around with his new car and passed the word that nobody was going to so much as point a torch in the general direction of his Merc. Johnny and Eddie agreed—the car was a good-looking boat and needed little or no improvement. But . . .

In an idle move, Johnny picked up a Lincoln Capri taillight and held it up to the

(*Continued on next page*)

• *Every custom feature performed on Cruse's Merc accentuates the car's width, length.*



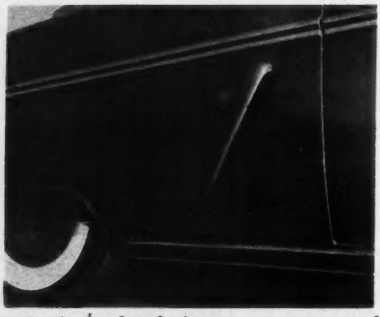
• *Center of bumper has been cut away, small '53 Lincoln grille component added.*

(*Continued from preceding page*)

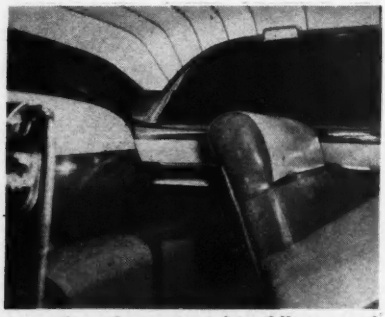
rear fender of Harry's nice, new, stock Merc.

Something in the air went "*Snap.*"

The vow was as good as broken. On went the taillights, the Merc lights being removed and the lower part of the fenders plated out with body steel to take the Lincoln lenses. Not long thereafter the trio, in solemn conclave, decided that it wouldn't hurt to remove the hood ornament and deepen the fake air scoop. One thing led to another with the interior coming in for a special re-



• *Stock simulated airscoop was converted into a real one with all trim removed.*



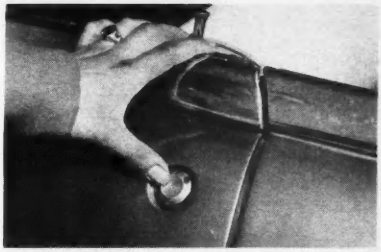
• *Interior color contrast is saddle tan and white Naugahyde with dark floor rugs.*

• *Incorporating the '53 Lincoln taillight lenses in rear fenders added the Capri look.*

covering. Even the engine got the treatment, being equipped with Fenton bolt-on equipment.

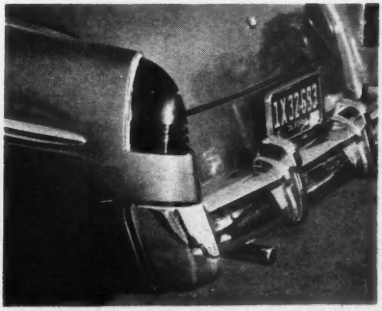
That's just about the story. The car wound up in Motorama where it was spotted by the Ford moguls. Taken by the car's close resemblance to the then unveiled '54 Merc, the Ford sales kids asked if they, too, could have the car for their show. Into the show it went where it became the first custom not built by the factory to steal a dealer showing.

Good work for three guys who weren't going to build a custom car!



• *Door handles were replaced with '42 Lincoln latches and exterior door buttons.*

• *Fenton bolt-on equipment covers exterior of the Lincoln-ized Merc's mill.*



• *Installing the '53 Capri lenses requires little work, with style results well worth it.*

INTERCHANGEABILITY PLUS!

(*Continued from page 61*)

tor is not just throat area but the fact that it becomes nearly impossible for a lead foot driver to overcarburate the engine by forcing the secondary system to open before the engine is breathing hard. The result is more beneficial mixture conditions because the engine is not starved while it is still at low rpm.

Undoubtedly, there will be many versions of single, dual and maybe even triple-Quad manifolds for these engines. However, the favorite combination of your humble speed artist will be an off-beat three-jug item. We propose to use a single throat glass bowl Holley, EBP 9510, as a master carb. This little monster will handle all low speed operation but when opened wide, will then signal two dual-throat jobs to start opening by the same means as on the '54 Merc and Lincoln. We contend that flexibility is lost on many of the multi-carb systems because of too much carburetor, too soon, and propose the above idea as a solution. Take it from there, men, the idea is free!

EXHAUST SYSTEMS

Any comment of ours could just add to the state of advertised confusion that already exists concerning the "garbage disposal" problem. But . . . the '54 Ford V8 was measured at 4000 rpm (100 mph, indicated, road load) with the *stock system*, by means of a gauge calibrated in hundredths of an inch of mercury and reasonably accurate to tenths. The pressure gauge is simply tapped into the exhaust manifold at the point where you wish to measure backpressure. In the Ford lab, engineers found 2.4 inches of mercury, left bank and 1.7 inches mercury, right bank. Installation of Ford's optional *dual system* with *stock* mufflers gave identical pressures on each bank of .4 of an inch mercury at 4000 rpm, road load. These figures are better than any figure we have seen. Dual systems are stock equipment on the 160 hp Police Interceptors and will be available soon for the average buyer. If you feel that dual exhausts are desirable, for whatever reason (and thousands do feel this way), then by all means go out and buy 'em, and enjoy 'em.

LETTERS

(*Continued from page 9*)

GIRLY GUY

Dear Sirs:

Look, fellows, I'm just an ordinary car fan and I don't understand all this show-how stuff. When I look at a magazine I want to see lots of pictures of cars and I don't care how they are built. How about cutting out all this technical stuff and tossing in a few pictures of pretty girls. Lots and lots of girls. And preferably lots of pictures of cars, any kind of cars. To my way of thinking this step-by-step stuff is strictly for the birds. Let the car makers build the cars—they do a better job anyway.

Yours for more girls,
Francis X. Riordan,
New York, N. Y.

Look at the masthead, friend.—ED.

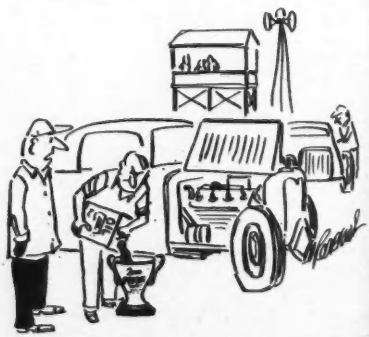
'NOTHER T-MAN

Dear Sirs:

I read every issue of your magazine CAR CRAFT and I just wondered if you would print a little more about Model "T" Fords. You see I have a '26 sedan and would like to do some work on it. Right now I'm fixing the inside up with a leather padded dash and new upholstery.

Sincerely,
Bob Hicks
Ashton, Ill.

'T' stories are rare, Bob, but we'll see what we can dig up.—ED.



Discount special of the month

Popular *Hollywood* *Wire* **WHEEL DISC**
set of 4 with locks
(reg. price is $99.50)

$41.95 15 inch

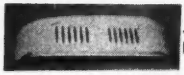
Motion picture actress
PHYLLIS BOBYK

FLARE SKIRTS

$8.45 pr.

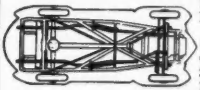
Ford	36-54	Ply	35-54
Consul-Zephyr	All	Dodge	35-52
Merc	39-54	DeSoto	35-54
Chev	36-54	Chry	35-54
Olds (exc. 98)	35-54	Buick	35-41, 50-53
Pont	35-54	Willys	52-54
Stude	35-52		

Skirts are all steel with concealed rubber liner. The easily installed skirts are primed for paint.



Italian **Louvered Flare Skirts $14.95**
For all cars listed above

V-8 Dual Exhaust Sets **$21.95**



Ford 35-53
Merc 39-53
Olds 49-53 **26.95**
Cad 50-51, Dodge 53, Stude 51-53, Linc 49-51, Ford Pick-Up 39-53

Exhaust HEADER SETS

POWER-TONE

FORD, MERC 37-54
CHEV 37-54
(Except conv. & Powergl.)
$35.95

AVAILABLE FOR MOST ALL CARS!
Sets include headers, header extension, mufflers, tail pipe, clamps and brackets.

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Set of 4 (15" or 16")

Triple chrome, heavy gauge metal. DURABLE, finished to a high lustre.

"Ding Dong" BERMUDA BELL

An unusual accessory—chrome finish, pleasant two tone signal. Easily installed under car floor by driver's seat. Fits all model cars. (Regular 5.95)..... $3.75

CUSTOM GRILLE BAR

$15.95

49-52 Ford
49-51 Merc
53 Ford.....$6.45

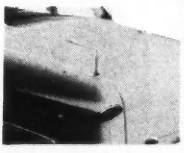
Specify make & year. Triple chrome heavy steel.

GENUINE
CONTINENTAL KIT

$43.45
49-54 Ford
49-54 Chev

Kit includes sturdy tire mount, lock mechanism, tire cover, bumper extension, stone deflector, chrome hub cap and misc. hardware.
Kits available for all cars

HIDE-AWAY REAR AERIAL KIT



3 section beautifully chromed hide-away aerial and long aerial lead wire for custom REAR mounting.

AERIAL with 108" Wire..... $7.45
AERIAL with 180" Wire..... 8.95
DUAL KIT (2 Aerials) 180" Wire.....$12.50

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Complete kit with instructions **$7.95**
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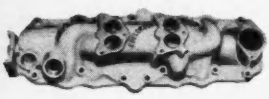

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If no dealer to serve you, write direct.

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(49-53)

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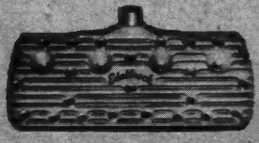

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SUPER MANIFOLD
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Here's the first, low-type power manifold. Nothing compares to it for maximum power performance!